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NOTES ON CHINESE BOTANY FROM NATIVE
AND WESTERN SOURCES

BY

E. BRETSCHNEIDER, M.D.,

Physician of the Russian Legation at Peking.

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CHINESE INTERCOURSE WITH THE COUNTRIES OF CENTRAL AND WESTERN ASIA DURING THE FIFTEENTH CENTURY. 1876. (China Review IV., V.)

UEBER DAS LAND FUSANG NACH DEN ALTEN CHINESISCHEN BERICHTEN. (Mittheilungen der Deutschen Gesellschaft für Natur- und Völkerkunde Ost-Asiens. Nov. 1876.)

NOTES ON SOME BOTANICAL QUESTIONS CONNECTED WITH THE EXPORT TRADE OF CHINA. (North-China Herald. Jan. 1881.)

ON CHINESE SILKWORM TREES. (North-China Herald. June 1881.)

EARLY EUROPEAN RESEARCHES INTO THE FLORA OF CHINA. (Journal of the North-China Branch of the Royal Asiatic Society XV., 1880.)

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CONTENTS.

	Page
Preliminary Notices... ..	18
CHAPTER I. Contribution towards a History of the Development of Botanical Knowledge among Eastern Asiatic Nations	22
1. Chinese Literature on Materia medica and Botany	22
2. Chinese Works on Agriculture	75
3. Chinese Geographical Works containing Botanical Information	86
4. Early Acquaintance of the Chinese with Indian and Western Asiatic Plants	92
5. History of Materia medica and Botany in Japan	96
6. On the Botanical Knowledge of Coreans, Manchoos, Mongols, and Tibetans	101
CHAPTER II. On the Scientific Determination of the Plants mentioned in Chinese books	105
CHAPTER III. Alphabetical List of Chinese Works	131
Index of Chinese Authors	217
APPENDIX. Celebrated Mountains of China... ..	223

PRELIMINARY NOTICES.

MORE than ten years have elapsed since I published a little essay¹ intended to show the mode adopted by the Chinese in treating of Natural science, especially Botany, and what degree of advantage European Botanists may derive from the study of Chinese botanical works. The present paper now brought before the public, although treating of the same subject and reproducing occasionally the matter of my former essay, will prove to be virtually a work new in substance, entirely recast, into which also a considerable amount of new information has been introduced.

In resuming my past labours after a long interval I cannot but repeat what I confessed in the preface of my former paper, that I am neither a Sinologue nor Botanist, my knowledge of Chinese as well as of Botany being quite limited. It may well then be

¹ *On the Study and Value of Chinese Botanical Works*, with Notes on the History of Plants and Geographical Botany from Chinese sources, by E. Bretschneider. Illustrated with 8 Chinese wood-cuts. This article appeared originally in the "Chinese Recorder" of 1870 and 1871, published in Foochow. The editor of this periodical, at that time, seems to have had little experience in proof-reading; at any rate my paper (although presented in a very clear manuscript) came to light with such a profusion of misprints and other inaccuracies, that it would have been ridiculous to append to it a complete list of *errata*. I therefore would feel quite disposed to disavow this my first scientific essay; all the more since at the time I wrote it I had not yet sufficiently mastered the subject, and many of my former statements require modification.

asked whether the author has the acquirements to fulfil the difficult task he has taken in hand; and what value may be assigned to a work dealing with matters for the elucidation of which the author declares himself not sufficiently trained by appropriate fundamental studies. I therefore owe to the reader some explanation as to the extent of my competence.

Nobody will, I think, object to my asserting that, for western people, Chinese is of all languages the most difficult; and (I should also say) the most ambiguous.² When I first arrived at Peking, 15 years ago, I felt a desire to make myself acquainted with the language in order to be able to utilize the vast literary treasures of the Chinese for the benefit of European science. I soon however became aware of the great difficulties to be encountered, and the long space of time which would be required to learn the language thoroughly. I therefore adapted my studies more exclusively to the branches of Chinese literature I intended to investigate, namely Natural History and Historical Geography. Here in Peking students of Chinese, even with a moderate stock of knowledge, do not generally find any difficulty in producing correct translations; and every information in this connection can easily be obtained from Chinese teachers or books. There are, I imagine, very few, if any, sinologues in China who translate independently and without availing themselves of the assistance of native scholars.

As to the botanical part of my researches, my own knowledge in this department generally is of secondary consideration only. During my long sojourn in China I have always been busy collecting plants, and in so doing I have paid especial attention to those employed by the Chinese for economic and medicinal purposes, ascertaining when possible their native names from books as well as from converse with the natives. My collections I have

² I hardly think that any sinologue, who has pursued his studies in China and read ancient Chinese authors (even with the assistance of a good native scholar), would in every case agree with the great sinologue Stan. Julien, who in his *Syntaxe de la Langue Chinoise*, I. p. 1, states that for an instructed sinologue the Chinese language is as clear and intelligible as any other. Unfortunately we have frequently to complain of the vagueness and want of precision of the Chinese style, the authors generally being more anxious to imitate what they call the classical style than to convey in their writings a clear idea of what they mean to say.

been in the habit of sending for determination to several of the most eminent botanists of our time, whose names will be frequently met with in this paper, and who have always afforded me liberal assistance in elucidating many dubious questions relating to interesting Chinese plants. This may suffice for the present to enable the reader to form an opinion as to the reliability of the statements put forward in these pages. It may be added that, having access to the splendid libraries of the Russian Ecclesiastical Mission and of the Russian Legation in Peking, where all Chinese works of importance and many rare European books relating to China are to be found, I was enabled to avail myself of many sources of information which it would be difficult to obtain elsewhere, either in China or in Europe. These favourable conditions encouraged me to enter upon the vast, yet almost unworked field of investigation of Chinese Botany from Chinese sources. It is the first attempt of the kind, and is published with a view to laying a foundation for future inquiries. My notes have been written for sinologues as well as for botanists, and I must beg the latter not to be alarmed at the frequent occurrence of Chinese hieroglyphics in the text. No knowledge whatever of Chinese is required to understand the quotations met with in these pages.³

M. Alph. De Candolle was the first to point to the importance of Chinese records for elucidating certain dubious botanical questions. His admirable work on Geographical Botany—a most interesting science first created by that eminent botanist—concludes in the following terms:—

“L’ancienneté, en Chine et au Japon, de quelques unes des
 “races de plantes cultivées est curieuse, du même que la sé-
 “paration du peuple chinois d’avec le peuple de l’Inde, à une
 “époque reculée, séparation qui se prouve par des cultures diffé-
 “rentes et par des noms de plantes usuelles, absolument différents.
 “J’ai senti à plusieurs reprises dans mes recherches combien

³ I may notice here that an eminent botanist in Europe has distinguished himself also as a sinologue. Steph. Lad. Endlicher, born in 1804, died in 1849 as Director of the Botanical Garden, Vienna, known by his numerous botanical writings (his “Genera Plantarum” is still a standard work), published in 1845 a Chinese Grammar and also an Atlas of China. He does not however seem to have directed his attention to Chinese botanical works.

“l'étude des encyclopédies chinoises et japonaises pourrait rendre plus de services à l'histoire des espèces cultivées, laquelle à son tour est importante pour l'histoire des nations.”

Indeed a considerable amount of information, interesting to botanists and throwing light especially on the history of cultivated plants, is found in Chinese literature, but is generally difficult to discover, and often involved in a mass of other matter, appreciated only by Chinese readers. We know from their ancient records the plants cultivated in China at an early period, when it had no intercourse with the other nations of Asia. We meet also with positive statements of ancient authors regarding other economic plants now abundantly grown all over the Empire, but introduced from other Asiatic countries, especially Western Asia, after these regions had become known.

After the discovery of America a great many American plants were introduced by the Spaniards and Portuguese into the Philippines and the Indian Archipelago. Their cultivation spread rapidly over the neighbouring regions of the old continent, and they found their way also to China. Most of these plants have become perfectly naturalized in Asia and, had the proof of their introduction from America not been preserved in ancient western records, they would certainly be considered natives of Asia. There are some other plants now generally cultivated in America as well as in Asia regarding which even M. De Candolle, notwithstanding his diligent researches, is unable to state, whether they are indigenous in America only, or whether they have been cultivated from time immemorial in Asia also. For the decision of these questions the ancient Chinese records again prove to be of great weight.

An important aid towards defining the geographical distribution of plants in China is found in the geographical works of the Chinese, and such information is all the more precious, as our botanical knowledge regarding the interior of the Empire is still almost a blank. In another place we shall speak more in detail of this branch of native literature.

There are numerous Chinese works dealing especially with Botany, Agriculture, and other kindred sciences relating to Practical Botany. They are replete with information regarding the uses of plants for food, clothing, manufacturing purposes, etc.

In introducing my work I may take the opportunity of explaining in a few words the plan of arrangement. I have divided it into a general and a particular part. The first, which forms the substance of the present paper, begins with a review of the History of Botany, Agriculture and Materia medica of the Chinese and other Eastern Asiatic nations, entering into some details concerning the most prominent treatises and authors in these departments. In the same chapter I shall attempt to show the method employed by the Chinese in describing plants and in investigating Botany and Materia medica.

Another chapter is devoted to the important question of identifying Chinese names of plants with scientific botanical names. I shall record the attempts made by European scholars to ascertain the botanical names of the plants described in Chinese books.

The first part will conclude with an alphabetical list of Chinese works, and another of Chinese authors quoted in native botanical treatises (the greater portion never before noticed in European books on Chinese literature). The time of publication will of course always be given, as this is a matter of primary importance for our investigations.

In the second part I shall endeavour to present a history of Chinese domestic, ornamental, medicinal, and other plants used for economic purposes, as far as these have come to the knowledge of botanists. My information has been derived from native authors as well as from European scientific works.

CHAPTER I.

CONTRIBUTION TOWARDS A HISTORY OF THE DEVELOPMENT OF BOTANICAL KNOWLEDGE AMONG EASTERN ASIATIC NATIONS.

I. CHINESE LITERATURE ON MATERIA MEDICA AND BOTANY.

Before I proceed to enter upon the subject, it may be well to recall a few points in Chinese ancient history intimately connected with our researches into the history of plants and Botany from native sources.

The early history of the Chinese, like that of other nations, is veiled in obscurity. It is a view generally held by western scholars, although not the slightest evidence confirming it is found in the early historical records of the Chinese, that the birth-place of this race was somewhere in Central or even in Western Asia, and that they entered their present land from the north-west, apparently by the main route along and across the Yellow River. It seems that this supposition of Chinese immigration is principally based upon the fact, that the most ancient Chinese historical documents establish the existence of aborigines in China, quite different from the "black-haired people," as the ancient Chinese termed themselves. Obscure as is the origin of this nation, it is certain, however, that when they first appeared on the stage of history about 3000 years B. C., they considered themselves indigenous in China. For ages they were a people of no consequence, developing themselves independently and quite apart from other Asiatic nations. For many centuries they were acquainted only with their immediate neighbours, with whom they were constantly at war. The southern part of the present province of Shansi was the cradle of the Chinese Empire, whence it gradually extended its power in all directions, but less towards the south. We may therefore conclude that all the Chinese names of plants met with in the earliest native historical documents refer principally to northern Chinese plants, all indigenous in these regions. Even at the time when Confucius compiled the Classics (about 500 B. C.), the Chinese dominions did not extend far south of the Yang tze kiang. The present provinces of Shensi, Shansi, Chihli, and Shantung formed the northern part of China in that period. But the centre of Chinese civilisation was then in Southern Shensi, especially in the valley of the *Wei* River and in the present Honan. For nearly 30 centuries the Chinese Emperors resided in these provinces in the neighbourhood of the *Wei* River or the Yellow River.

The Emperor Ts'in Shi Huang Ti, B. C. 246—209, celebrated as the builder of the Great Wall (the same who ordered the burning of all Chinese books, sparing only those on Medicine, Divination and Husbandry), succeeded first in establishing his

authority over the feudal states of China. He subjected the whole Empire to one sole sovereign, and then conquered the regions which are now comprised in the provinces of Fu kien, Kuang tung and Kuang si, known in ancient times by the general name of 南越 *Nan Yüe*. But in B. C. 206 Nan Yüe revolted and became again independent.

The Emperor Wu Ti, B. C. 140—86, of the Han dynasty, made himself master of the south-western portion of present China and reconquered Nan Yüe,^{3a} subjecting also a part of Annam. Then the Chinese Empire had nearly the same limits as the Chinese assign to China proper now-a-days. It was under the glorious reign of this Emperor that China, after centuries of isolation, became first acquainted with Japan and the countries of Central and Western Asia. I am aware that a French orientalist has endeavoured to prove that an embassy from Egypt was sent to China as early as B. C. 1113, and that 130 years later the Chinese Emperor Mu wang visited Western Asia. But such assertions are nothing but fantastic dreams. We can safely assume that, before the second half of the second century B. C., the Chinese had no intercourse with the distant countries of Western and Southern Asia, and were even ignorant regarding the tribes dwelling in Central Asia.

In about 139 B. C. Emperor Wu ti despatched one of his officers named 張騫 *Chang K'ien* on a diplomatic mission to the 月氏 *Yue chi* (or *Yue ti*), a people who first dwelt near the north-western frontier of China, but had been driven away by the Hiong nu and had then settled near the river Oxus. The 匈奴 *Hiong nu* at that time occupied the steppes of Mongolia and were constantly at war with China. Chang K'ien, who had necessarily to pass through their dominions, was made prisoner and retained

^{3a} We read in the *Sau fu huang tu*, an ancient description of the public buildings in Chang an, the ancient metropolis during the Han, near the present Si an fu in Shensi (see alph. list of works 647), as follows :

After the Han Emperor Wu Ti, in B. C. 111, had subdued Nan Yüe, he built the palace *Fu li* (in Chang an), and in the garden appertaining to it a number of rare herbaceous plants and trees brought from those southern regions were planted. Among the plants enumerated there I have been able to identify the following :

Nephelium Litchi, *N. Longan*, *Conarium album*, *C. Pimela*, *Areca Catechu*, *Cinnamomum Cassia*, the *Banana*, *Canna indica*, *Quisqualis indica*, sweet *Oranges*.

for ten years by the *shan yü* (Khan) of the Hiung nu. Finally he succeeded in escaping to the west and penetrated to the countries of the Jaxartes and the Oxus, where he spent more than a year. On his way back he was again laid hold of by the Hiung nu, but escaped a year later and returned to China in 126 B. C. He brought back intelligence about various regions in the west and their natural productions. The official report of his observations and his biography are preserved in the *Shi ki* or Historical Record compiled by the celebrated Sze Ma ts'ien, a contemporary of Chang K'ien (book 111). In ancient catalogues (事言要元, see Introduction to alph. list) Chang K'ien is reported to have published a narrative with the title 海外異物記 *Hai wai i wu ki*, Record of remarkable things in foreign countries. The Emperor rewarded Chang K'ien after his return, and some years later raised him to the dignity of prince. In B. C. 123 he was commander-in-chief of the Chinese troops directed against the Hiung nu. Owing to a defeat the Chinese had suffered Chang K'ien was cashiered, but was afterwards pardoned. He died about B. C. 103. He is said to have introduced many useful plants from Western Asia into China. Ancient Chinese authors ascribe to him the introduction of the Vine, the Pomegranate, Safflower, the Common Bean, the Cucumber, Lucerne, Coriander, the Walnut-tree and other plants.

After Chang K'ien had first visited the countries of the west, the geographical knowledge of the Chinese in that direction rapidly increased. China extended its dominions over a great part of Central Asia, and envoys were frequently sent to the realms of Western Asia, and even to India, which country had been known to Chang K'ien only from hearsay. Since the introduction of Buddhism into China, about A. D. 66, intercourse between China and India had become very frequent and continued for centuries, but India was then generally reached by the long circuit of Bactria and Kabul.

The art of perpetuating books by engraving characters upon wood or stone and then printing from the plates, can be traced back in China as early as A. D. 593, but it is probable that an invention of this kind to multiply writings existed there much

earlier.⁴ It is certain that the Chinese enjoyed at least 800 years earlier than European nations these advantages of diffusion of literature and preservation of ancient records and documents. This circumstance has done much to prevent the loss of many ancient native writings, which render the study of Chinese literature so useful and interesting for European antiquaries.

The early history of the botanical knowledge of the Chinese is closely connected with the history of their Agriculture and Medicine; and their acquaintance with plants dates back from the period when they first began to employ plants for economical and medical purposes.

According to Chinese tradition the semi-mythical Emperor 神農 *Shen nung*, who is said to have reigned in the 28th century B. C., is the Father of Husbandry and Medicine. The *Li ki* (one of the Classics, see further on) states that Shen nung was born near the 厲山 *Li shan* (Sui chou, Northern Hupeh). He is said to have subsequently dwelt in 陳 *Ch'en* (Western Honan), and then moved to 魯 *Lu* (Southern Shantung). See the last edition of the *Shi ki* (Historical Records), in the first pages of which the ancient traditions regarding this Emperor have been brought together. 13 *li* north of *Lu an fu* (Southern Shansi) there is a mountain called 百穀山 *Po ku shan*, mountain of the cereals,⁵ with a temple on its top, where, according to the *I t'ung chi* or Great Geography of China, Emperor Shen nung is still worshipped. This temple was founded in the 6th century of our era. At the foot of the mountain is the *po ku ts'üan*, or fountain of the cereals. Here tradition makes Shen nung first teach his people how to till the ground and raise grain. Hence it was that his grateful subjects called him Shen nung or Divine husbandman.

It has also been handed down by tradition that Shen nung first tested the medical qualities of herbs and discovered medicines to

⁴ Compare Dr. W. Williams' interesting article on the subject in the "Chinese Recorder," 1875, p. 22.

⁵ The term *po ku*, which occurs first in the Classics (*Shi king*, *Shu king*), properly means "the hundred cereals," but the Chinese frequently use the numeral "hundred" in a general sense.

cure diseases, and the city of Wen hien (Huai king fu, Honan) claims to be the spot where this happened. In the Wen hien chi (topography of this city) it is stated that the 神農澗, rivulet of Shen nung, is situated inside the eastern gate. Here according to tradition Shen nung collected medicinal herbs, tested them and touched the soil with his staff, whereupon the water sprung forth. The earliest writings on medicinal plants and dietetics are ascribed to him. 2697 B. C. is given as the year of his death.

Shen nung's successor, the Emperor 黃帝 *Huang ti*, who reigned in the 27th century B. C., is said to have established his residence in 涿鹿 *Cho lu* (Pao an chou, west of the present Peking). He is considered the author of the first Chinese works on the art of healing. See Alph. list of works 204.

THE MATERIA MEDICA OF EMPEROR SHEN NUNG.

The well known Chinese Materia medica, *Pen ts'ao kang mu*, of which I shall offer a detailed review in the proper place, in giving an opening sketch of the principal treatises of this class, begins with the 神農本草經, *Shen nung Pen ts'ao king*, or Classical work on Medicines⁶ of the Emperor Shen nung. We find there the following account of this ancient document, which we know only from the quotations of it in other succeeding ancient works of the same kind, to which it has served as a model.

Chang Yü si (who lived in the first half of the 11th century) says: According to ancient tradition this treatise was in 3 books and Emperor Shen nung was the author of it. But no ancient author states that he has seen it himself. In the section on literature in the Ts'ien Han shu (History of the Former Han dynasty, 202 B. C.—25 A. D., where many medical works extant in the first century B. C. are enumerated) no mention is made of this book. But in the biography of Emperor *P'ing ti*, 4th year of his reign (A. D. 4), we find a statement that the Emperor ordered all men in the Empire, familiar with medical prescriptions

⁶ Li Shi chen, the author of the *Pen ts'ao kang mu*, explains that the term *Pen ts'ao* properly means "Herbal," but, as the majority of medicines are derived from the vegetable kingdom, it is used to designate a treatise on drugs in general.

and the *Pen ts'ao* (see note 6), to assemble in the capital.—In the biography of 樓護 *Lou Hou* (Ts'ien Han shu, 92) it is said that, when he was yet but a boy, he knew by heart the 醫經, *I king* (treatise on medicine), the *Pen ts'ao* and several thousands of medical prescriptions. Thus there can be no doubt that at that time there existed a *Pen ts'ao*.

Li Shi tsi (an author of the T'ang period, 7th century), and before him the 七錄, *Tsi lu*, a work of the Liang dynasty (6th century), speak of the Shen nung pen ts'ao in 3 books; suggesting that it was probably committed to writing during the Han dynasty, for there occur in the book names of places in China referring to the time of the After Han (25—221 A. D.). According to these authorities *Chang Ki* or *Hua T'o'*⁷ may be the authors of it. But *Chang Yü si* (who quotes the above statements) does not agree with this opinion. He admits an early existence of the *Pen ts'ao king* and adduces the *Huai nan tsz'* (2nd century B. C.), which records that Emperor Shen nung in the space of one day tasted the plants and experimented on their efficacy. He found among them 70 to be poisonous. This was the beginning of medical art in China.

Chang Yü si continues: In remote times, when the art of writing was not yet known, science was transmitted from generation to generation by oral tradition, and what was called *Pen ts'ao* then was not a written book. From the period of the Han dynasties (B. C. 202—A. D. 221) medical art began to develop. *Chang Ki* and *Hua T'o'*⁷ largely contributed to the diffusion and completion of medical knowledge, commented on previous writings, and added new information, arranging the whole into a system. This was probably the time when the *Materia medica* of Shen nung first appeared as a written treatise.

K'ou Tsung shi (about 1115 A. D.) says: In the History of the Han dynasty it is stated that it is not certain who first compiled the *Pen ts'ao*. The *Shi pen* (written before the Han period) and the *Huai nan tsz'* duly record that Shen nung tasted plants and examined their medical virtues, but they do not speak of a *Pen*

⁷ Celebrated physicians in the third century of our era. See further on note 12 (5 and 6).

ts'ao. There is however a statement in the *Ti wang shi ki* (History of the early Emperors, compiled in the 3rd century) that *Huang ti* (the successor of Shen nung) ordered his minister *K'i po* (see note 12) to examine the efficacies of plants, to compose a *Pen ts'ao king* (a standard herbal), and to lay down prescriptions for curing diseases. This proves that the appellation of *Pen ts'ao* can be traced back to the time of Huang ti. Nature had bestowed on the ancient sages peculiar faculties for recognizing instinctively, by the taste of natural productions, what was their efficacy in curing sickness. The rules they established were followed by the sages of later times who tried to complete and to enlarge the original matter.

According to *Li Shi chen* (the author of the *Pen ts'ao kang mu*), the Shen nung *Pen ts'ao king* was originally a treatise in three parts treating of 365 different drugs. It was first commented on by *T'uo Hung king* (A.D. 452-536) who wrote also a supplement to it (see further on *Ming yi pie lu*).

In the great catalogue of the Imperial Library, book 104, fol. 51, we read that the Shen nung *Pen ts'ao king* does not exist now-a-days as a separate treatise and that we know it only from the *T'ang Shen wei Pen ts'ao* (a *Materia medica* of the Sung dynasty; see further on No. 26.) in which the passages printed in white letters on black ground all refer to the text of the Shen nung *Pen ts'ao*.

The *Pen ts'ao kang mu* reproduces also to some extent the text of the *Materia medica* of Shen nung and generally quotes this treatise under the abbreviated title of 本經 *Pen king*. Under the head of "the celebrated arrangement of drugs by the Emperor Shen nung" the *Pen ts'ao kang mu*, in the first book, first part, fol. 43 sq., gives the text of a part of the Shen nung *Pen ts'ao* relating to the qualities, the use, the gathering of drugs, etc. That ancient document arranges the drugs under 3 classes and reads as follows:

Of the first class of drugs there are 120 sorts which are considered to perform the functions of 君 *Kün* or *Sovereigns*. They support human life, and thereby resemble Heaven. They are not poisonous. Whatever quantity you take, or howsoever long you

use them, they are harmless. If you wish to have the body light, to improve the breath, to live to an old age, without growing old, make use of these drugs of the first class.

Amongst the drugs of the first class are reckoned :

Ginseng, *Rad. Nelumbii speciosi*, *Euryale ferox* (semina), *Jujubes*, *Oranges*, *Jobs-teurs*, *Dioscorea*, *Benincasa cerifera*, *Amaranthus Blitum*, *Capsella bursa pastoris*, *Sonchus arvensis*, *Cannabis sativa*, *Ulmus pumila* (bark eaten as food), *Pachyma pinetorum*, *Mushrooms*, *Cassia bark*, *Liquorice*, *Rehmannia glutinosa*, *Kochia scoparia*, *Tribulus terrestris*, *Kadsura*, *Alisma plantago*, *Acorus*, *Typha*, *Plantago*, etc.

There are 120 sorts of drugs of the second class, which are considered to perform the functions of 臣 *ch'en* or *Ministers*. They support human nature, and thereby resemble man. Some of these drugs are harmless; others are poisonous. They ought to be used with discretion.

If you wish to lessen the violence of diseases and re-establish decayed strength, use the second class of drugs.

Amongst the drugs of the second class we find : *Ginger*, *Paeonia Moutan*, *Paeonia albiflora*, *Lilium tigrinum*, *Xanthium strumarium*, *Gentiana*, *Polypodium Barometz*, *Nipholus Lingui*, *Zanthoxylon*, *Trichosanthes*, *Thladiantha dubia*, *Lemna*, etc.

There are 125 sorts of drugs of the third class which are considered to perform the functions of 佐 *tso*, *Assistants* and 使 *shi*, *Agents*. They cure diseases, and thereby resemble earth. They are very poisonous and ought not to be used continuously. If you wish to drive out cold or heat from the body, or to correct the breath, or to open obstructions, or to heal diseases, use the drugs of this class.

Among the drugs of the third class are reckoned : *Rheum palmatum*, *Phytolacca acinosa*, several species of *Euphorbia*, *Aconite*, *Veratrum*, *Rhododendron*, *Croton*, *Peach kernels*.

The drugs of these three classes make in all 365, corresponding in number to the number of degrees of the zodiac; each degree answering to one day of the year.

It does not come within the province of our investigations to translate the whole chapter which explains the system of that primeval Emperor regarding the qualities and efficacy of medicines, and illustrates the views entertained up to this time on the subject in China. A translation of the greater portion of this curious document will be found in Du Halde's *la Chine* III 444-452, and also in Bridgman's *Chin. Chrestomathy* 503 sq. (translated by Dr. W. Williams).

Li Shi chen in the Pen ts'ao kang mu mentions only 347 of the (365) drugs specified in the Shen nung Pen ts'ao, 239 of them belong to the vegetable kingdom, 65 refer to animals, 43 are obtained from minerals.

As to the medicinal plants enumerated in Shen nung's Materia medica, they are up to the present time known to Chinese physicians by the same ancient names. As the greater part of them are natives of North-China and known to me, I shall give here the botanical names of those plants of the Shen nung Pen ts'ao which I have been able to ascertain. I omit the Chinese names, which will be given at the proper places in the second part of my work.

Ranunculus sceleratus.
 Aconitum, several spec.
 Paeonia Moutan.
 P. albiflora.
 Magnolia Yulan.
 M. hypoleuca ?
 Schizandra chinensis.
 Akebia quinata.
 Aceranthus sagittatus.
 Nelumbium speciosum
 Euryale ferox.
 Chelidonium ?
 Sisymbrium.
 Capsella bursa pastoris.
 Polygala sibirica.
 P. tenuifolia.
 Dianthus Seguieri.
 Malva verticillata.
 Tribulus terrestris.
 Zanthoxylum, several spec.
 Citrus aurantium.
 Aegle sepiaria ?
 Melia Azedarach.
 Euonymus Thunbergianus.
 Zizyphus vulgaris.
 Z. Lotus
 Vitis vinifera.⁸
 V. serianaefolia.
 Koelreuteria paniculata.
 Rhus vernicifera.
 Glycyrrhiza glandulifera.
 Soja hispida.
 Pueraria Thunbergiana.
 Rhynchosia volubilis.

Sophora japonica.
 S. flavescens.
 S. angustifolia ?
 Gleditschia sinensis.
 Cassia Sophera.
 Acacia Julibrissin.
 Prunus japonica.
 Pr. several species.
 Amygdalus persica.
 Rubus.
 Potentilla, several spec.
 Poterium officinale.
 Rosa indica.
 Sedum alboroseum.
 Trichosanthes palmata.
 Lagenaria.
 Benincasa cerifera.
 Thladiantha dubia.
 Bupleurum falcatum.
 Cicuta.
 Sium Ninsi ?
 Seseli Libanotis.
 Cnidium Monnieri.
 Levisticum.
 Angelica.
 Peucedanum.
 Aralia japonica.
 Panax Ginseng.
 Hedera scandens.
 Sambucus ?
 Gardenia florida.
 Rubia cordifolia.
 Patrinia.
 Dipsacus.

⁸ It is evidently by a mistake which crept into the ancient tradition, when it first began to appear as a written document (in the second century, as the Chinese authors believe), that the *Vine* is mentioned in the Shen nung Pen ts'ao. For we have evidence from other ancient native records that this plant was first introduced into China in the second century B. C.

Eupatorium chinense.
 E. several species.
 Aster, several species.
 Inula chinensis.
 Carpesium abrotanoides.
 Xanthium strumarium.
 Achillea sibirica.
 Chrysanthemum indicum.
 Artemisia capillaris.
 A. apiacea.
 A. several other species.
 Petasites japonicus.
 Atractylis chinensis.
 Carduus crispus.
 Lactuca versicolor.
 Platycodon grandiflorum.
 Adenophora.
 Rhododendron.
 Forsythia suspensa.
 Fraxinus.
 Ligustrum lucidum.
 Olea fragrans.
 Vincetoxicum.
 Gentiana.
 Lithospermum erythrorhizon.
 Calystegia.
 Cuscuta chinensis.
 Physalis Alkekengi.
 Lycium chinense.
 Scopolia japonica.
 Scrophularia Oldhami.
 Rehmannia glutinosa.
 Orobanche.
 Tecoma grandiflora.
 Catalpa Bungei.
 Incarvillea sinensis.
 Vitex incisa.
 Salvia plebeja.
 S. miltiorhiza.
 Nepeta Glechoma.
 Scutellaria viscidula.
 Leonurus sibiricus.
 Plantago major.
 Celosia argentea.
 Amarantus Blitum.
 Achyranthes aspera.
 Kochia scoparia.
 Phytolacca acinosa.
 Polygonum tinctorium.
 P. hydropiper.

Polygonum aviculare.
 Rumex crispus.
 Asarum Thunbergii.
 Aristolochia recurvilabra.
 Cinnamomum Cassia.
 Daphne.
 Viscum or Loranthus.
 Euphorbia helioscopia.
 E. other species.
 Elaeococca verrucosa.
 Croton tiglium.
 Ulmus pumila.
 Cannabis sativa.
 Morus alba.
 Salix babylonica.
 Thuja (Biota) orientalis.
 Zingiber officinale.
 Alpinia.
 Bletia hyacinthina.
 Dendrobium moniliforme.
 Iris oxypetala.
 Iris, other spec.
 Pardanthus chinensis.
 Dioscorea sativa.
 Ophiopogon japonicus.
 Paris quadrifolia.
 Polygonatum officinale.
 Lilium tigrinum.
 Anemarrhena asphodeloides.
 Asparagus lucidus.
 Veratrum album.
 Arum pentaphyllum.
 Pinellia tuberifera.
 Acorus.
 Typha angustifolia.
 Lemna minor.
 Alisma plantago.
 Bambusa.
 Coix Lachryma.
 Imperata.
 Equisetum arvense.
 Selaginella involvens.
 Niphobolus Lingua.
 Polypodium Barometz.
 Ferns.
 Pachyma pinetorum.
 Mylitta lapidescens.
 Various Mushrooms.
 Sargassum.

THE CHINESE CLASSICS.

Important documents relating to the plants with which the Chinese were acquainted in early ages are found in the Chinese classics and especially in the *Shu king*, the *Shi king*, the *Chou li*, the *Li ki* and the *Rh ya*, regarding which I shall here offer a few remarks.

The 書經 *Shu king* or Classical Book of Historical Records, the most ancient historical work in China, was compiled by Confucius about 500 B. C. Besides some scattered notices on Chinese plants this Classic contains a chapter entitled 禹貢 *Yü kung* or Tribute of Emperor Yü, which presents a peculiar interest for us. This is a geographical description of ancient China, referring to about 2200 B. C., in which are enumerated the principal natural productions of each of the nine provinces into which China was then divided.

The 詩經 *Shi king*, or Book of Odes, likewise compiled by Confucius, is replete with names of plants, which however are often difficult to ascertain. There are even special Chinese works dealing with the plants and animals mentioned in the *Shi king* and the commentaries on them. The oldest work on the subject is the 毛詩艸木鳥獸蟲魚疏 *Mao Shi ts'ao mu niao shou ch'ung yü shu*, Commentary on the herbs, trees, birds, beasts, insects and fishes mentioned in 毛萇 *Mao Ch'ang's* version of the *Shi king*, in 2 books, by 陸機 *Lu ki*, literary name 士衡 *Shi heng*, of the kingdom of *Wu*, 260-303 A. D. The original work was lost and that now current was compiled, it is not known when and by whom, mainly from K'ung Ying ta (Dr. Legge, *Shi king*).

In quoting the *Shu king* and the *Shi king* I always refer to the splendid translations by Dr. Legge.

The 周禮 *Chou li*, or Ritual of the Chou dynasty, B. C. 1122-249, gives a good deal of interesting information on Chinese plants, domestic and others. It was written about 1100 B. C. A good French translation of this classic was published by Biot, 1851.

The 禮記 *Li ki*, Book of Rites. Although the matter contained in it is of early origin like that of the other classics, it came to light in its present form about the close of the first century B. C. It is especially the section entitled 月令 *Yüe ling*, Rules for every month of the year, in which names of plants frequently occur and which is often quoted in Chinese botanical works. The *Li ki* has been commented upon by 鄭玄 *Cheng huan*, A. D. 127-200.

This classic has never been completely translated into any European language. The translation of the Li ki by Callery into French, 1853, is only an abstract of the work.

THE 爾雅 RH YA.

This seems to be at first sight the most interesting among the classics for our purposes of research. It is a Dictionary of terms used in Chinese ancient writings generally ascribed to 周公 *Chou kung*, the Duke of Chou, about 1100 B. C. It was completed by 子夏 *Tsz' Hia*, a disciple of Confucius, nearly 700 years later, and remodelled into its present shape by 郭璞 *Kuo P'ò* in the 3rd century.⁹ It seems that the Rh ya was principally intended to explain terms occurring in the Shi king (of which, as is known, a considerable part has been lost.) In his commentaries Kuo P'ò frequently quotes the Book of Odes and also the *Li sao*, the famous poetical production of *Kü Yüen*, 4th cent. B. C. and the *Kuang ya*, an ancient dictionary, the author of which lived in the middle of the 3rd. cent. (See alph. list Nos. 445, 383.)

The greater half of the matter in the Rh ya, arranged under 19 sections (釋 *shi*, properly: explanation), treats of natural objects. The names of plants are found in the 13th and 14th sections under the heads of 草 *ts'ao*, Herbs and 木 *mu*, Trees. Nearly 300 plants are enumerated there and in other sections as many animals. In some editions the text is accompanied with drawings. In the preface of the illustrated edition of 1802 it is stated that these wood-cuts originally date from the time of the Sung dynasty and that they have been carefully reproduced from a manuscript copy made by one who lived in the time of the Yüan or Mongol period (13th or 14th cent.). According to the History of the Sui dynasty (section on literature, book 32) there existed in the Liang period (6th cent.) two volumes of drawings illustrating the Rh ya, which were made by Kuo P'ò, but they had been lost.¹⁰ Subsequently to the time of Kuo P'ò 江灌 *Kiang kuan* prepared

⁹ An excellent account of the Rh ya by E. C. Bridgman is found in the Chinese Repository XVIII (1849), p. 169.

¹⁰ The earliest original drawings of plants extant in European collections are those accompanying a manuscript copy of Dioscorides' Materia medica, dating from the 5th century and preserved in the Great Vienna Library.

a volume of drawings illustrating the Rh ya. See T'ang shu, section on literature. Kiang kuan lived in the 4th cent. (see his biography Tsin shu 83), according to some authorities in the 6th cent. The drawings of the Rh ya now extant are generally very rough and, so far as plants are concerned, seldom enable one to recognize what particular plant is intended.

The original information given in this ancient dictionary with respect to natural objects is extremely aphoristic and fragmentary, not more than three, sometimes four characters being devoted to each name, and as I understand, these characters represent the book names and the popular names of the plants and animals without other explanations. Each phrase of the Rh ya is followed by the commentary of Kuo P'ò. The sounds of uncommon words are always given.

The Rh ya had already been commented upon by several Chinese scholars previous to Kuo P'ò. In the History of the Sui (section on literature) three authors of the Han period are mentioned, who had written commentaries on this dictionary, viz: 樊光 *Fan Kuang*, 劉歆 *Liu Hin* (first cent. B. C.) and 李巡 *Li Sün*.

郭璞 *Kuo P'ò* was a celebrated scholar and expositor of the Taoist doctrine who lived A. D. 276-324, a native of *Wen hi hien* (Kiang chou, Shansi). His literary appellation was 景純 *King ch'un*. He was invested with the posthumous title 弘農郡守 *Hung nung kün shou* (Prefect of the ancient department of *Hung nung*, in the present Ho nan). See his biography Tsin shu 72. His preface to the Rh ya reads as follows: (see Bridgman l. c.)

This book, the Rh ya, is designed to exhibit the general scope of education, to point out the sources of poetic composition, to collect and arrange the phrases of past generations, and to discriminate the real distinctions between things that seem to be identical.

It is in deed a safe conduct for men of all professions, a key to all arts, a deep fountain for the scientific reader, and a flower garden for the "belles lettres" writers.

If a work be desired that will enlarge our knowledge of all things, free us from every delusion, and extend our acquaintance with the various departments of natural history, there is none so useful as the Rh ya.

The *Rh ya* had its origin in middle antiquity and was in the highest repute during the Han, when its varied uses were unfolded on the occasion of the disquisition regarding the Leopard rat (豹鼠)¹¹

Then the illustrious and erudite scholars, the elegant and master writers of the age, all honored, esteemed and highly appreciated both its principles and its lessons of instruction.

Regardless of my inability and want of knowledge, I commenced the study of it while yet but a young man and zealously and assiduously continued the same twice nine years.

Although many commentators had exercised their talents upon it, yet none of their works were complete. Much in them was confused and erroneous, and some things were omitted and still wanting.

For these reasons I have in my turn undertaken to bring together the meanings of the words and to collect all the ancient explanations. I have extended my researches to the dialects of all the different states of the Empire and made collections from the popular songs and sayings. Having thus collected a great variety of terms and by careful examination ascertained their correct and popular use, I have endeavored to remove all defects and inaccuracies and to put away all that is low and vulgar.

When quotations, which were not common or well understood, have been made, they have been supported by requisite proofs, but all such as seemed plain and easy have been passed over without comment.

Moreover, with a view to prevent all misunderstanding, I have in separate parts indicated the sounds and added drawings.

Thus I have labored hard to make clean and plain the path of learning, earnestly hoping that, by this work, the progress of scholars in future times may be greatly facilitated.—

Some of the ancient names of plants found in the text of the *Rh ya* are still in use, but the majority of them were unknown even at the time when Kuo P'ò lived and he tried therefore to explain what plants were meant, giving their popular names. In

¹¹ Compare W. F. Meyers' article on the Mammoth in Chinese records. *China Review* VI, p. 273.

all probability he utilized previous commentaries for his explanations. Chinese writers on botany place absolute confidence in the identifications given by Kuo P'ò. But a closer investigation of the subject has convinced me that in this respect he proceeded as arbitrarily as the swarms of other Chinese commentators of the classics, and that his statements must be accepted with caution. I have the same mistrust with regard to Chinese identifications of the archaic names of plants as found in the Shi king and other classical writings.

Another commentary of the Rh ya was published with the title of 爾雅正義 *Rh ya cheng i* by 孫炎 *Sun Yen*, styled also 孫叔然 *Sun Shu yen*, a contemporary of Kuo P'ò. Comp. Biograph. Dict. Shang yu lu.

Subsequently to the time of Kuo P'ò the Rh ya was commented upon by 邢昺 *Hing Ping* A. D. 932-1010, and by 鄭樵 *Cheng Ts'iao*, A. D. 1108-1162. Compare Sz' k'u ts'üan shu ming mu lu IV, 16. Mayers' Chin. Read. Man. p. 52.

In the 11th century a work on the plan of the Rh ya, an appendix to it, with the title 埤雅 *P'i ya*, in 20 books, was composed by 陸佃 *Lu Tien*, A. D. 1042-1102. Comp. Sz' k'u etc. IV, 17. Mayers l. c. p. 140.

A similar appendix appeared a century later with the name of 爾雅翼 *Rh ya i*, in 32 books. The author of it was 羅願 *Lo Yüan*, styled also 端良 *Tuan liang* and 存齋 *Ts'un ts'i*. He lived in the 12th century. Sung shi 380.—Sz' k'u etc. IV, 17.

I may finally mention here the 山海經 *Shan hai king*, Classic of the Mountains and Seas. It is an ancient geographical description of China of a somewhat fabulous and mythical character. The authorship is generally ascribed to the Emperor Yü, B. C. 2200. According to Mr. Wylie (Notes on Chin. lit. p. 35) it is at least as old as the Chou dynasty and probably of a date even anterior to that period. We meet in it with a profusion of names of mountains and rivers unknown now-a-days, and the position of which is indicated only in a general way. Many plants and animals are likewise mentioned in it, but in many cases we can make nothing of these names.

The Shan hai king in 13 books is noticed in the bibliographical

section of the History of the Former Han in the catalogue compiled in the 1st century B. C. *Kuo P'ò* wrote a commentary on it. The edition now current is in 18 books. Compare *Journal Asiatique*, 1839: Notice du Chan hai king par M. Bazin (ainé), where some specimens of the work are given.

THE 南方草木狀 NAN FANG TS'AO MU CHUANG.

This is the earliest Chinese treatise dealing with plants and bearing a purely botanical character. The title means: Account of the Flora of the Southern Regions. The author was 稽含 *Ki Han*, a Minister of State under Hui ti of the Tsin dynasty, A. D. 290—307. He had been previously Governor of Canton. See his biography, *Tsin shu* 89. This small treatise is not a rare book, it is found in the *Han Wei ts'ung shu* (Wylie l. c. 209) and other collections of reprints. It is also reproduced in the botanical section of the famous *T'u shu tsi ch'eng*, books 3, 5, 15, 186. We meet in it with interesting accounts of some trees and other plants known at that time in South-China, some of them brought from distant foreign countries. The plants are treated under the four classes of herbs, forest-trees, fruit-trees, and bamboos, including in all 80 species. Among the plants described there the following can be ascertained:

The Banana.
Jasminum officinale.
Jasminum Sambac.
 The Nutmeg-tree.
Canna indica.
 Sweet-potato (*Batatas*).
 Betel-leaf.
 Long Pepper.
Acorus.
Quisqualis indica.
 Sugar-cane.
Phyllodes placentaria, Lour.
Livistonia chinensis.
Clerodendron squamatum.
Brassica napus.
Ipomœa reptans.
Cymbidium ensifolium.
Liquidambar formosana.
 Olibanum (brought from western countries).
Ficus retusa.
 Bitter-seeded Cardamom.
Cinnamomum Cassia.
Hibiscus syriacus.

Lawsonia (Henna).
Aloexylum Agallochum.
 Cloves.
 Caryota.
Terminalia Chebula.
Cæsalpinia Sappan.
Glyptostrobos heterophyllus.
Cunninghamia sinensis.
Vitex Negundo.
 Rattans.
 Areca Catechu.
 Cocoa-nut.
Myrica sapida.
Nephelium Litchi.
Nephelium Lungan.
Canarium Pimela.
Canarium album.
 Coco de Mer.
Averrhoa Carambola.
 Various Oranges.
Phyllanthus Emblica.
Aleurites triloba.
 Spondias.
 Various Bamboos of South-China.

Besides the 80 plants described under separate headings, several other Chinese plants are mentioned "en passant" under the same Chinese names by which they are still known in this country, viz. :

Hibiscus mutabilis.	Arundo phragmites.
Vitis vinifera.	Dendrobium moniliforme.
Nelumbium speciosum.	Diospyros Kaki.
Zingiber officinale.	Pomegranate.
Dioscorea sativa.	Eriobotrya japonica.
Caladium esculentum.	Althæa sinensis.
Gardenia florida.	Sophora japonica.
Sterculia platanifolia.	Juniperus chinensis.
Rhapis flabelliformis (perhaps Chamærops?)	Cedrela sinensis.
Brassica chinensis.	Castanea vesca.
Sagittaria chinensis.	Acacia Julibrissin.
	Juglans regia.

A short record of a similar character to the Nan fang ts'ao mu chuang is the 魏王花木志 *Wei wang Hua mu chi*, Notice of the Flowers and Trees of the Prince of Wei (perhaps the Prince of Wei is the author). It has likewise been reprinted in the T'u shu tsi ch'eng l. c. book 5, and as I can infer from the place assigned to it in that Encyclopædia, it seems to belong to the same period (perhaps a century earlier) as the Nan fang ts'ao mu chuang. It is sometimes quoted in the Pen ts'ao kang mu. I have not been able to gather any other information regarding its author or time of publication in any Chinese bibliographical work. Among the 15 plants recorded in it I may mention the following :

The 思惟 *Sz' wei* or 貝多 *Pei to* tree, the seeds of which are said to have been brought from India at the time of the Han dynasty, is *Borussus flabelliformis*.—*Magnolia Yulan*.—*Camellia japonica*.—*Hibiscus syriacus*.—*Cinnamomum Cassia*.—*Citrus japonica*.—*Rhododendron*.—*Quisqualis sinensis*.

CHINESE STANDARD WORKS ON MATERIA MEDICA.

I now proceed to review briefly in chronological order the Chinese works on Materia medica (and Natural History) which at different times have been considered the capital treatises in this department. My information regarding these compilations and their authors has for the greater part been derived from the bibliographical notices already mentioned, given by Li Shi chen in the introductory part of the Pen ts'ao kang mu. From these accounts I select the more important statements, occasionally elucidating them by extracts drawn from other quarters. Li Shi

chen reviews in all 42 of such works of note on Materia medica. The *Shen nung Pen ts'ao king* (1.), which we have already dwelt upon and which forms the nucleus of all subsequent Chinese treatises on the subject, is placed at the head of the 42 works reviewed, the earlier of which, having long been lost, were known to Li Shi chen only from the accounts and quotations given of them by previous authors. After the *Shen nung Pen ts'ao* the next in order of time is

2. The 采藥錄 *Ts'ai yao lu*, directions for gathering drugs, in 2 books, by 桐君 *T'ung kün*, one of the ministers of the Emperor Huang ti. This treatise gives also some descriptive accounts of medicinal plants.

3. The 雷公藥對 *Lei kung Yao tui*, Materia medica of *Lei kung*, who was one of the sages employed by the Emperor Huang ti in his labours to perfect the art of healing. This treatise, to which tradition ascribes a high antiquity, was published (from an ancient manuscript, I understand) in 2 books with additional remarks and commentaries by 徐之才 *Sü Chi ts'ai*, a celebrated physician living in the second half of the 6th century, a native of Tan yang (Chin kiang fu). See his biography *Pei Ts'i shu* 33.

4. The 李氏藥錄 *Li shi Yao lu*, Materia medica of *Li* or 李當之 *Li Tang chi*, a subject of the Wei dynasty, in the first half of the 3rd century. He was a disciple of the celebrated *Hua T'o* (see note 12).

5. The 吳氏本草 *Wu shi Pen ts'ao*, Materia medica of *Wu* or 吳普 *Wu P'u*, a native of Kuang ling (present prefecture of Yang chou fu in Kiang su), likewise a subject of the Wei, first half of the 3rd century, and a disciple of *Hua T'o*. He compiled his treatise, one book, from the works of the Emperors *Shen nung* and *Huang ti*, and the writings of *K'i Po*, *T'ung kün* (see above 2), *Lei kung* (see above 3), *Pien Ts'iao*, *Hua T'o*,¹² *Li Tang chi* (see above 4).

¹² The above names refer to ancient celebrated Chinese physicians. Besides the primeval Emperors—神農 *Shen nung* (styled also 藥聖 *Yao sheng*, the sage of

6. The 炮炙論 *P'ao chi lun* by 雷公 *Lei kung* or properly 雷斅 *Lei Hiao*, who is not to be confounded with the Lei kung

medicines) and 黃帝 *Huang ti* (styled also 軒轅 *Hien yüan* and 藥王 *Yao wang*, prince of medicines), already spoken of—the 十大名醫 *shi ta ming i* or ten celebrated Doctors are worshipped in the chief medical temple in Peking, called 藥王廟 *Yao wang miao*, and in other temples. See Dr. J. Dudgeon's interesting paper on Medical Divinities, *Chin. Recorder* 1870 III, p. 40. On the tablets in that temple we find the following names of famous physicians. I add some biographical notices gathered from various sources.

1. 岐伯 *K'i Po*, styled also 藥祖 *Yao tsu* (ancestor of medicines), a native of Northern China, one of the assistants of Emperor Huang ti, his tutor in medical investigations and the reputed founder of the art of healing. Hence the phrase 岐黃術, the science of K'i po and Huang ti for medical skill. See Mayers' *Chin. Read. Man.* p. 97. The *Pen ts'ao kang mu*, I. b. fol. 12 sq., gives some specimens of K'i Po's views on the nature of drugs. In the section on literature in the *Sui shu* mention is made of a work named 岐伯經 *K'i Po king*.

2. 雷公 *Lei kung*, a physician of the time of Huang ti. See above No. 3.

3. 扁鵲 *Pien Ts'iao*, likewise one of the physicians of Huang ti, but according to another tradition a famous physician of the 6th century B. C. See his biography in the *Shi ki* (Histor. record) book 105, and Mayers' *Chin. Read. Man.* p. 172. Pien ts'iao, known also under the name of 秦越人 *Ts'in yüe jen*, was a native of 渤海 *Po hai* (in the present province of Chihli, Ho kien fu), but subsequently took up his abode in the state of Lu, wherefore he is sometimes styled 盧醫 *Lu i* (the physician of Lu). He is said to have first gained a knowledge of the internal parts of the body. The theory of the pulse is likewise derived from his discoveries. A medical treatise *nan king* (on difficult medical questions) is attributed to him. See alphab. list of works, 562.

4. 淳于意 *Chun Yü i*, an official of the time of Emperor Wen ti (179—156 B. C.), having charge of the public granaries in Ts'i. and hence entitled 太倉公 *Tai ts'ung kung*. See Mayers' *Chin. Read. Man.* p. 37; *Shi ki*, book 105, where his biography is found. He devoted himself to the study of the art of medicine, in which he attained to wondrous skill. He has left a collection of medical prescriptions. See alph. list of works, 849.

5. 張仲景 *Chung Chung king*, sometimes styled also 機仲景 *Ki Chung king* or 張機 *Chang Ki*. *Wen hien t'ung k'ao* 222, Wylie, *Chin. lit.* 80, 82. He was a native of 南陽 *Nan yang* (province of Honan) and prefect of *Chang sha* (Hu nan) during the latter Han, it seems end of the second century. He was a celebrated physician and has left a treatise on fevers and several other medical writings. See alph. list of works, 678, 328, 329.

6. 華陀 *Hua To*, literary appellation 元化 *Yüan hua*, second century and first half of the third. A native of 沛國譙 *Pei kuo ts'iao* (present Po chou, An hui), a renowned physician, the Esculapius of China. Mayers' *Chin. Read. Man.* p. 68; *Chin. Repos.* II. 275; *Hou Han shu*, book 112b. Hua to is said to have been versed in all the secrets of Taoism, and to have been especially successful in surgical operations. He is reputed to have relieved the great *Ts'ao ts'ao* (the founder of the Wei dynasty, died 220) from a cerebral disease by means of an operation. He was also in possession of an anaesthetic agent for producing insensibility during surgical

of Huang ti's time (see above 3), for *Lei Hiao* with the title *Lei hung* was an author of the Liu Sung dynasty (A. D. 420—477). The P'ao chi lun was a treatise in 3 books, explaining the medical virtues of 300 drugs and giving directions for the preparation of medicines.

7. We now come to one of the most important ancient treatises on Materia medica, the **名醫別錄** *Ming i pie lu*,—as this title implies, an account of drugs or medicines recommended (after the time of Shen nung) by eminent physicians. In the Pen ts'ao kang mu this work is generally quoted with the abbreviated title of *Pie lu*. The author of it was **陶宏景** *T'ao Hung king*, A. D. 452—536 (see his biography Liang shu 51), one of the most celebrated adepts in the mysteries of Taoism and a distinguished

operations. In his biography this medicine is called **麻沸散** *ma fei san*, which has been erroneously translated by Stan. Julien, Tatarinov and others by "a preparation of Hemp." The character *ma* means indeed Hemp, but is also used to designate in the popular language "insensibility," and **麻藥** *ma yao* is to be translated by "anæsthetic prescription." The prescriptions which in Peking go by the name of *ma yao* contain Aconite, the tubers of some poisonous plants of the Arum family. Henbane, sometimes Datura. Hua t'io fell afterwards a victim to political intrigue and perished by Ts'ao ts'ao's command, more than a hundred years old. Several medical treatises are attributed to him: See alph. list 99, 189.

7. **王叔和** *Wang Shu ho*, according to the Wen hien t'ung k'ao a native of **高平** *Kao p'ing* (province of Shantung). He was Court physician during the Western Ts'in dynasty (A. D. 265—317). He wrote a celebrated treatise on the pulse. See alph. list 528.

8. **葛洪** *Ko Hung*, a native of Kü yung (Kiang ning fu, Kiangsu), a celebrated Taoist and Alchemist, died A. D. 330. Literary name **抱朴子** *Pao po tsz'*. Mayers' Chin. Read. Man. p. 86; Tsin shu 72. About his works on Alchemy and Medicine see alph. list 63, 579, 694, 695, 769.

9. **皇甫** *Huang Fu*, and 10 **李士真** *Li Shi chen*. I have not been able to find these names in Chinese biographical dictionaries or medical works. Perhaps **皇甫謐** *Huang Fu mi*, a celebrated scholar A. D. 215—282, who has also left some works on medicine, and **李時珍** *Li Shi chen*, the author of the Pen ts'ao kang mu.

In the temple *Tung yo miao*, near Peking, there are also tablets of the ten celebrated doctors, and here we find instead of Huang fu and Li shi chen two other names, viz.: **孫思邈** *Sun Sze mo* and **韋慈藏** *Wei Tsz' tsung*. The first was a celebrated Taoist and physician of the 7th century (see further on works on Materia medica No 9), the second a famous Court physician in the beginning of the 8th century. He is mentioned in the Kiu T'ang shu 191.

For biographical notices regarding other celebrated Chinese physicians (Bridgman's Chin. Chrest. p. 498, 499) see the alph. list.

physician, a native of 秣陵 *Mo ling* (near the present Nan king). The Emperor Kao ti of the T's'i dynasty, 479—482, made him preceptor of the Imperial princes; and the Emperor Wu ti of the Liang, 502—550, was at one time among the number of his disciples. T'ao Hung king subsequently retired into seclusion among the recesses of the mountain 勾曲山 *Kou k'ü shan*,^{12a} where the eighth of the haunted grottoes of the Taoists, the 華陽洞 *Hua yang tung* is situated, and devoted himself to meditation and study. The Emperor Wu ti endeavoured in vain to attract him into public life, and was accustomed to consult him. (Mayers' Chin. Read. Man. p. 214). T'ao Hung king is also known under the name of 陶隱居 *T'ao yin kü* (T'ao the hermit) or 華陽真人 *Hua yang chen jen* (the saint of Hua yang). Besides this he is sometimes styled 通明 *T'ung ming* (his literary appellation).

Li Shi chen states that the Shen nung Pen ts'ao king specifies in three books 365 drugs in accordance with the number of days. T'ao Hung king in the Pie lu added 365 new medicines recommended by famous physicians of the Han and Wei dynasties. This treatise comprised seven books. The text of Shen nung's Materia medica was represented in it by red characters, whilst T'ao Hung king's additions were written in black characters. He presented his composition to the Emperor Wu ti of the Liang. One chapter of the Pie lu, treating of the preparation of medicines, is reproduced in the Pen ts'ao kang mu, book 1a fol. 55 sq., and was translated into French by Visselou. Cnf. Du Halde: La Chine III, 453—459.

8. The 藥總訣 *Yao tsung küe*, another treatise on medicines, in two books, is a production of the same author.

9. The 千金食治 *Ts'ien kin shi chi*, a treatise on articles of food and the preservation of health by 孫思邈 *Sun Sz' mo*, an erudite scholar deeply versed in Taoist lore and in the art of healing, who flourished at the commencement of the 7th century A. D. Mayers' Chin. Read. Man. p. 194. He was a native of

12a The *Kou kü shan*, called also 茅山 *Mao shan*, is one of the reputed mountains of the Taoists. According to Chinese maps it is situated south-east of K'ü yung hien (Kiang ning fu [Nanking], Kiang su).

華原 *Hua yüan* (the present Yao chou, Si an fu, Shensi) and retired into seclusion on the 太白山 *T'ai po shan*.¹³ He was induced circa A. D. 630 to leave his mountain hermitage for the court of Emperor T'ai Tsung, where he performed many miracles. Sun Sz' mo is the author of numerous medical treatises. See alph. list 31, 707, 934—937. He is one of the celebrated doctors of China and is worshipped in the state temples among the divinities of the healing art. He is styled also 孫真人 *Sun chen jen*.

10. The 藥性本草 *Yao sing pen ts'ao*, on the medical virtues of drugs, in four books, by 甄權 *Chen Kuan*, a native of Hü chou (Honan), end of the 6th and first half of the 7th century. He died under the reign of T'ai tsung (A. D. 627—50) at the age of 120 years. See his biography in the T'ang shu 252. He also wrote a treatise with the title 藥性論 *Yao sing lun* and other medical works.

11. The 唐本草 *T'ang Pen ts'ao*, or Materia medica of the T'ang dynasty. The Emperor Kao tsung issued about A. D. 650 a mandate for the revision and completion of the Shen nung Pen ts'ao and *T'ao yin kü's* commentaries and additions (see above 7). This was undertaken by a commission under the superintendence of 李勣 *Li tsi*, a high officer. The new work comprised seven books and was generally styled 英公唐本草 the *T'ang Pen ts'ao* of *Ying kung*, the latter being a title of *Li tsi*. A few years later 蘇恭 *Su Kung*, another high official, was appointed to revise and to complete it once more. 長孫無忌 *Chang Sun nu ki* and 22 others were associated with him in the work. They added 114 new objects, and classed the whole under the heads of Minerals, Man, Quadrupeds, Birds, Insects, Fishes, Cereals, Vegetables, Fruits, Trees, Herbs, and natural objects not employed in medicine. This was called the 唐新本草 *T'ang Sin pen ts'ao* or New Pen ts'ao of the T'ang. The descriptive part of it extended to 20 books, with one book for the index. To this were added

¹³ The *T'ai po shan*, where one of the haunted grottoes of the Taoists is situated, lies in the south-western corner of the prefecture of Si an fu.

25 books of pictorial illustrations representing natural objects, and 7 books of annotations explaining the drawings.¹⁴

12. The 食療本草 *Shi liao pen ts'ao*, in 13 books, by 孟詵 *Meng Shen*, a functionary of the T'ang, in the second half of the 7th century, a native of Ju chou (Honan). See his biography T'ang shu 252.

13. The 本草拾遺 *Pen ts'ao shi i*, in 10 books. This title may be translated by: Omissions in previous works of Materia medica, supplied by 陳藏器 *Ch'en Ts'ang k'i*, a functionary in San yüan hien (Si an fu, Shensi). He lived in the first half of the 8th century.

14. The 海藥本草 *Hai yao pen ts'ao*, an account of the drugs of southern countries in 6 books, by 李珣 *Li Süen*. Second half of the 8th century.

Li Shi chen mentions yet another treatise, of the same period it seems, dealing with foreign drugs, which has been lost. Its title was 胡本草 *Hu Pen ts'ao*, Materia medica of the *Hu* (western nations or India), in 7 books, by 鄭虔 *Cheng K'ien*.

15. The 四聲本草 *Sz' sheng pen ts'ao*, in 5 books, by 蕭炳 *Siao Ping*, a scholar of the T'ang period (7th to 9th century). In this treatise the matter is arranged according to the four sounds (sz' sheng) of Chinese pronunciation.

16. The 刪繁本草 *Shan fan pen ts'ao*, in 5 books, by 楊損之 *Yang Sun chi*, a physician and functionary in the second half of the 8th century, a native of 潤州 *Jun chou* (the present Chin kiang fu, Kiangsu). The author endeavours to eliminate all useless matter found in the previous treatises on Materia medica.

17. The 本草音義 *Pen ts'ao yin i*, in 2 books, by 李含光 *Li Han kuang*, a subject of the T'ang dynasty (A. D. 618—907).

¹⁴ These drawings are not the first pictorial attempt of the Chinese in this department. As we have seen the *Rh ya*, commented upon by Kuo P'o in the 3rd century, was accompanied with drawings.

18. The 本草性事類 *Pen ts'ao sing shi lei*, in one book, by 杜善方 *Tu Shan fang*, a physician of the Chinese metropolis. Time unknown. But Li Shi chen ranges him among the T'ang authors.

19. The 食性本草 *Shi sing pen ts'ao*, in 10 books, by 陳士良 *Ch'en Shi liang*, a learned physician of Kien chou (Pao ning fu, Sz' ch'uan) in the 10th century. This is a compilation from previous works on Materia medica, with some additional matter on dietetic food.

20. The 蜀本草 *Shu Pen ts'ao* was compiled about the middle of the 10th century by order of 孟昶 *Meng Ch'ang*, prince of *Shu* (the modern Sz' ch'uan, then governed by an independent ruler). The prince entrusted with this task 韓保昇 *Han Pao sheng*, a Doctor of the Academy, and some distinguished physicians, and wrote himself the preface to the work, which was published in 20 books, illustrated by wood-cuts. It professes to be a revision and an amplification of the T'ang *Pen ts'ao* (see 11).

21. The 日華諸家本草 *Ji hua Chu kia pen ts'ao*, published about A. D. 970, in 20 books, by 大明 *Ta Ming* (literary appellation *Ji hua*), a native of Tung lai (Shantung province).

22. The 開寶本草 *K'ai pao Pen ts'ao*, or Materia medica of the period K'ai pao (A. D. 968—976) of the Sung dynasty, drawn up by command of the first emperor of this dynasty by 劉翰 *Liu Han*, Court physician, and 馬志 *Ma Chi*, a Taoist scholar and physician, who were assisted in the completion of their task by nine other scholars. They brought together in this work the principal matter of all previous treatises on Materia medica, and described 133 new specimens. In all there are 983 objects detailed in it.

23. The 嘉祐補註本草 *Kia yu Pu chu Pen ts'ao*, the *Pen ts'ao* revised and commented upon, published during the period Kia yu (of the Sung). It was compiled in compliance with an

Imperial order in A. D. 1057, in 20 books, by 掌禹錫 *Chang Yü si*, a high functionary, assisted by 林億 *Lin i*, another high official, and several physicians of note. Chang Yü si, a distinguished scholar, was a native of *Yen ch'eng hien* (Hü chou, Honan). 1082 articles are detailed in this treatise, 82 of them being new.

24. The 圖經本草 *T'u king pen ts'ao*, or illustrated Pen ts'ao, in 21 books, published by Imperial order, was compiled by 蘇頌 *Su Sung*, a high functionary and distinguished scholar, a native of Ts'üan chou in Fu kien, after the *Kia yu pen ts'ao* (see 23) had been completed. The drawings of the natural productions of China in this work had been executed by Imperial command from nature in the various districts of the Empire. Use had also been made of similar earlier drawings dating from the T'ang period (see above 11). This illustrated *Materia medica* comprised 21 books.

25. The 本草別說 *Pen ts'ao pie shuo*, the production of 陳承 *Ch'en Ch'eng*, a distinguished physician, was published about A. D. 1090. It is a revised combination of the *Pen ts'ao* and the *T'u king* (24).

26. The 證類本草 *Cheng lei pen ts'ao*, known also under the name of 大觀本草 *Ta kuan Pen ts'ao*, for it was compiled in the second year of the reign of Ta kuan, A. D. 1108, by 唐慎微 *T'ang Shen wei*, a physician of Shu (the present Sz' ch'uan). This work unites all that was most valuable in the earlier treatises on *Materia medica*. The matter is arranged in 31 chapters under the heads of: Precious stones, Metals, Herbs, Cereals, Vegetables, Fruits, Trees, Insects, Fishes, Birds, Quadrupeds, Man. In all 1455 objects are described. 294 plates of drawings are added. The *Ta kuan Pen ts'ao* is still extant, but I have not come across it. Klaproth was in possession of the first book of it. See *Catalogue des livres (chinois etc.) de Klaproth* No. 144, and *Sz' k'u ts'üan shu* 103, fol. 35. Klaproth's edition was of 1469 A. D.

27. The 本草衍義 *Pen ts'ao yen i*, published about A. D. 1115, in 3 books, by 寇宗奭 *K'ou Tsung shi*, a celebrated physician of the Sung dynasty.

28. The 潔古珍珠囊 *Kie ku Chen chu nang* (Kie ku's Bag of pearls), one book. *Kie ku* is the literary name of 張元素 *Chang Yüan su*, a celebrated physician during the Kin dynasty (A. D. 1115—1234). See his biography *Kin shi* 131. He was a native of 易州 *I chou* (Chihli province) and wrote several other medical treatises.¹⁵

29. The 用藥法象 *Yung yao fa siang*, one book, on the use of drugs, by 李杲 *Li Kao*, a celebrated physician of Chen ting (Chihli). Literary appellation: 明之自 *Ming chi tsz'*. He is more generally known by his pseudonym 東垣 *Tung yüan* and flourished in the 12th and 13th centuries. He was a pupil of Kie ku (see 28), and is the author of many other medical treatises. See alph. list 222, 414, 612, 616, 737, and his biography, *Yüan shi* 203.

30. The 湯液本草 *T'ang i pen ts'ao*, in 2 books, by 王好古 *Wang Hao ku*, a learned physician in the first half of the 13th century, the author of several medical treatises. See alph. list 225, 228, 969, 1093, and Wylie l. c. 79. His literary appellation was 進之 *Tsin chi*, his pseudonym 海藏 *Hai ts'ang*.

31. The 日用本草 *Ji yung pen ts'ao*, in 8 books, by 吳瑞 *Wu Shui*, a physician of Hai ning chou (Hang chou fu, Chekiang) of the Mongol period.

32. The 本草詩括 *Pen ts'ao ko kua*. Judging from the title it seems to be a *Materia medica* arranged in verses. The author of it was 胡仕 *Hu Shi*, a physician of the Mongol period.

¹⁵ He is not to be confounded with a famous physician of the same name, *Chang Kie ku*, also a native of North-China, who lived during the Ming dynasty. See his biogr. *Ming shi* 299.

33. The 本草衍義補遺 *Pen ts'ao yen i pu i*, a revision and amplification of No. 27, by 朱震亨 *Chu Chen heng*, a celebrated physician and Taoist scholar, who lived in the second half of the 14th century. Literary appellation 彥修 *Yen siu*, but he is more generally known under the name of 丹溪 *Tan k'i*. He was a native of Yi wu (Kin hua fu in Chekiang). His biography is given in the *Yüan shi*, 189. For his other medical treatises see alph. list 217, 348, 369, 788.

34. The 本草發揮 *Pen ts'ao fa hui*, in 3 books, by 徐彥純 *Sü Yen shun*. Literary appellation 用誠 *Yung ch'eng*. He was a pupil of Chu Chen heng (see 33).

35. THE 救荒本草 KIU HUANG PEN TS'AO.

This is a treatise on the plants fit for supporting life in time of scarcity by 周定王 *Chou ting wang* (literary appellation 朱橚 *Chu siao*; pseudonym 誠齋 *Ch'eng chai*), an Imperial Prince, the fifth son of the first Ming Emperor Hung Wu, who reigned A. D. 1368—1398. See *Ming shi* 116, Biographies of the Imperial princes. Chou ting wang is noticed there as the author of the above work. But the author of the *Pen ts'ao kang mu* attributes the authorship to 周憲王 *Chou hien wang*, who was a son of Chou ting wang. As the great Catalogue *Sz' k'u ts'üan shu* explains, C. II. 8, this error arose from the circumstance that Chou ting wang's name does not appear in the original edition.

We learn from Chou ting wang's biography that he dwelt for a long time, from 1382 to about 1400, in K'ai feng fu (Honan), where his appanages were situated; and then removed to the province of Yün nan. He died in 1425; his son Chou hien wang in 1439.

Chou ting wang, who is also known as the author of several writings on medical subjects (see alph. list 642, 793), took a great interest in botany and made special study of the wild and cultivated plants suitable for food; his information on the subject having chiefly been derived from the experience of peasants and farmers. The original edition of the *Kiu huang pen ts'ao* was first published in the beginning of the 15th century, in 2 books;

a second edition in 4 books, the one now current, appeared in 1559 with a preface by 陸東 *Lu tung*. This edition was in the possession of Klaproth (see the catalogue of his Chinese and other books No. 145). It was reprinted at the end of the well-known Thesaurus of Agriculture, the Nung ch'eng ts'üan shu, of which we shall speak further on.

The Kiu huang pen ts'ao is not a simple compilation from earlier treatises, but for the greater part an original work based upon the author's own experience. As his principal abode was in K'ai feng fu, all the plants recorded in his treatise belong to the Flora of Honan, or are cultivated there. The districts and mountains mentioned in it are generally situated south of the Yellow River, and west and south-west of K'ai feng fu. The name of the district of 密 *Mi (hien)* occurs frequently, and also that of 輝 *Hui (hien)*, which is north of the Yellow River. The province of Honan seems to be very rich in interesting plants, especially mountain plants, drugs, but has never been explored by western botanical collectors.

The Kiu huang pen ts'ao describes in all 414 plants, 138 of which were recorded in previous works on Materia medica, 276 being new. The matter is arranged in five classes, viz.: Herbs, Trees, Cereals, Fruits, and Vegetables. Each plant is represented by an original drawing. As far as I can judge from the plants known to me these drawings are tolerably true to nature. It must not be forgotten that the original wood-cuts date from a time when engravings on wood were altogether unknown in Europe.¹⁶ Many of the delineations in this Chinese work are certainly superior to some European wood-cuts of the 17th century, as, for instance, those in Bontius' *Hist. nat. Indiæ orient.* 1629.

Among the plants depicted and described in the ancient Chinese treatise the following can be ascertained. I enumerate them in the order followed in the Kiu huang pen ts'ao, grouping the species according to the parts of the plant used for food.

¹⁶ According to E. Meyer's *Geschichte der Botanik*, IV, 278, the earliest European wood-cuts representing plants are found in Cunrat von Meigenberg's *Buch der Natur*, the first edition of which was printed in Augsburg, in 1475.

A. Herbs.

a. *Leaves used for Food.*

Cnicus.
 Carduus.
 - Petasites japonicus.
 Polygonum aviculare.
 Isatis indigofera.
 Dianthus Seguieri.
 Hemerocallis graminea.
 Plantago major.
 Polygonum orientale.
 Astragalus.
 - Aristolochia recurvilabra.
 - Inula chinensis.
 Oxalis corniculata.
 - Cnidium Monnieri.
 Foeniculum vulgare.
 Bupleurum falcatum.
 Gentiana.
 Poterium officinale.
 Angelica.
 Humulus japonicus.
 Incarvillea sinensis.
 Platycodon grandiflorum.

Aster.
 - Siegesbeckia orientalis.
 Alisma Plantago.
 Commelina communis.
 Scorzonera.
 Viola.
 - Artemisia vulgaris.
 - Calendula officinalis.
 Sedum.
 Balsamine hortensis.
 Chelidonium majus.
 Ranunculus.
 Cuscuta chinensis.
 Agriophyllum ?
 Epilobium.
 Potentilla.
 Rosa.
 Syneilesis aconitifolia.
 Vitis heterophylla.
 Hibiscus ternatus.
 Metaplexis Stauntonii.
 Geranium.

b. *Roots.*

Lilium tigrinum.
 Polygonatum officinale.
 Asparagus lucidus.
 Phytolacca acinosa.
 Ophiopogon japonicus.

Bœhmeria nivea.
 - Atractylis chinensis.
 Acorus.
 Barnardia scilloides.
 Dioscorea (wild species).

c. *Fruits or Seeds.*

Coix Lachryma.
 Tribulus terrestris.
 Sida tiliæfolia.
 Echinochloa Crus galli.
 Eleusine Coracana.

Thladiantha dubia.
 Luffa ægyptiaca.
 Vincetoxicum sibiricum.
 Momordica Charantia.
 Duchesnia fragaroides.

d. *Leaves and Fruits.*

Rumex crispus.
 - Xanthium Strumarium.
 - Physalis Alkekengi.
 Rubia cordifolia.

Silene.
 Vincetoxicum.
 Solanum ?
 Sphærophysa.

e. *Roots and (generally young, tender) Leaves.*

Rehmannia glutinosa.
 - Arctium Lappa.
 Polygala sibirica.
 Adenophora.
 Endotropis caudata.
 Algæ variæ.
 Scirpus lacustris.
 Typha.

Arundo phragmites.
 Imperata.
 Polygonum multiflorum.
 Trichosanthes palmata.
 - Chrysanthemum indicum.
 Lonicera chinensis.
 Cassia Sophera.
 Sparganium.

f. *Stem.*

Limnanthemum nymphoides.

| Sagittaria.

g. *Sprouts and Seeds.*

Hydropyrum latifolium.

B. Trees (and Shrubs).

a. *Leaves.*

Camellia Thea.	Ligustrum.
Acacia Julibrissin.	Quercus.
Hibiscus syriacus.	Populus suaveolens.
Populus alba.	Zanthoxylum Bungei.
Rhus Cotinus.	Kœlreuteria paniculata.
Cedrela sinensis.	Tilia.

b. *Fruits.*

Zizyphus Lotus.	Ficus Carica.
Quercus chinensis.	Hovenia dulcis.
Vitex.	- Galls of Celtis sinensis.
Cratægus pinnatifida.	

c. *Leaves and Fruits.*

Lycium chinense.	Gleditschia sinensis.
Thuja orientalis.	Broussonetia papyrifera.

d. *Flowers.*

Chimonanthus fragrans.	Catalpa Bungei.
Wisteria chinensis.	Sophora japonica.

e. *Flowers, Leaves and Fruits.*

Pyrus betulæfolia.	Xanthoceras sorbifolia.
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f. *Leaves, Bark and Fruits.*

Morus alba.	Ulmus pumila.
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g. *Young Shoots.*

Bambusa.

C. Cereals and the like. Young Leaves and Seeds used for Food.

Various wild leguminous plants.	Sesamum indicum.
Vicia Faba.	Soja hispida.
Fagopyrum emarginatum.	Perilla ocimoides.
Papaver Rhœas.	Dolichos sinensis.
Cannabis sativa.	Chenopodium.

D. Cultivated Fruits and Tubers.

a. *Fruits.*

- Prunus pseudocerasus.	- Cydonia sinensis.
- Juglans regia.	Eriobotrya or Mespilus.
Diospyros Kaki.	- Prunus japonica.
Pyrus sinensis.	Trapa.
Vitis vinifera.	Diospyros Lotus.
Prunus domestica.	Wild Vine with edible fruit.

b. *Fruits and Leaves.*

Punica granatum.	Amygdalus Persica.
Prunus Armeniaca.	Pyrus spectabilis.
Zizyphus vulgaris.	

c. *Roots (Tubers).*

Colocasia esculenta.	Eleocharis tuberosa.
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d. *Roots and Fruits (Seeds).*

Nelumbium speciosum.	Euryale ferox.
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E. Vegetables.

a. Leaves.

- | | | |
|--------------------------------------|--|-------------------------|
| - Brassica chinensis, var. oleifera. | | - Medicago sativa. |
| - Amaranthus Blitum. | | - Mentha arvensis. |
| - Sonchus arvensis. | | Mentha, other spec. |
| - Portulacca oleracea. | | - Amaranthus tricolor. |
| - Lactuca denticulata. | | - Allium victoriale. |
| - Beta vulgaris. | | - Thlaspi arvense. |
| - Chrysanthemum coronarium. | | - Lactuca squarrosa. |
| - Malva verticillata. | | - Taraxacum officinale. |

b. Roots.

- Stachys affinis.

c. Roots and Leaves.

Viviparous cultivated Allium and other wild species.

d. Leaves and Fruits.

- | | | |
|----------------------------|--|----------------------|
| - Capsella Bursa pastoris. | | - Chenopodium album. |
| Ocimum. | | |

e. Roots and Fruits.

- Dioscorea sativa.

36. The 庚辛玉冊 *Keng sin yü ts'e*, in 2 books, compiled about 1430 from various Taoist works, enumerating under 541 heads the natural objects employed in alchemy. The author of it was 寧獻王 *Ning hien wang*, also an Imperial Prince, the 17th son of Hung Wu. See Ming shi 117, Biographies of the Princes. His pseudonym was 臞仙 *K'ü sien*. He was a man of great learning and well versed in Taoism, Alchemy, Medicine, Agriculture and Horticulture. He wrote many works, which in all extend to several hundred books. See alph. list 318, 319, 697, 742.

37. The 本草集要 *Pen ts'ao tsi yao*, in 8 books, an epitome of the Pen ts'ao, published towards the end of the 15th century by 王綸 *Wang Lun*, a native of Tsz' ki (Ning po fu). See his biography, Ming shi 299. Literary name 汝言 *Ju jen*; pseudonym 節齋 *Tsie chai*.

38. The 食物本草 *Shi nu pen ts'ao*, in 2 books, by 汪穎 *Wang Ying*, a native of Kiang ling (King chou fu, Hupei), prefect of Kiu kiang during the Ming. It was published in the beginning of the 16th century and is based upon a previous work

by 盧和 *Lu Ho*: On the substances employed for food.¹⁷ About Lu Ho see list of works 857.

39. The 食鑑本草 *Shi kien pen ts'ao*, a treatise of the same character as the preceding, by 寧原 *Ning Yüan*, published during the reign of Kia tsing (1522—67).

40. The 本草會編 *Pen ts'ao hui pien*, in 20 books, published likewise during the reign of Kia tsing, by 汪機 *Wang Ki*, a celebrated physician of that period, a native of K'i men (Hui chou fu, An hui). Literary appellation 省之 *Sheng chi*. His biography *Ming shi*, 299.

41. The 本草蒙筌 *Pen ts'ao meng ts'üan*, in 12 books, published towards the end of the Kia tsing period, about 1567, by 陳嘉謨 *Ch'en Kia mo*, likewise a physician of K'i men. Literary appellation 廷采 *T'ing ts'ai*.

42. THE 本草綱目 PEN TS'AO KANG MU.

This celebrated Chinese Materia medica, written more than 300 years ago, which we are now about to review, is well known also in Europe. Translations from it have frequently been published by European sinologues. It forms the type of all the Chinese productions of this class, is held in high esteem by the Chinese, and represents indeed the most important native work on Materia medica and Natural History. It is the first treatise of this kind in which the matter is more critically treated.

李時珍 *Li Shi chen*, the famous author of the *Pen ts'ao kang mu*, was born at 蕪州 K'i chou in Hu pei, probably in the first quarter of the 16th century, and died towards the close of the same century. His literary name was 東璧 *Tung pi*. He wrote also under the pseudonym of 頻湖 *Pin hu*. As was the case with the majority of the early Chinese physicians of note, Li Shi chen was not a professional medical man, but a civil functionary and magistrate of the district of 蓬溪 *P'eng k'i* (T'ung

¹⁷ There is another treatise with the same title by 胡文煥 *Hu Wen huan*, also of the Ming period. See the catalogue *Hui k'o shu mu* II, 37.

ch'uan fu, Sz' ch'uan).¹⁸ Besides his principal work, the Pen ts'ao kang mu, he left several medical treatises mentioned in the catalogue Sz' k'u ts'üan shu ming mu lu X, 17, 18. See also alph. list 218, 916, and Li Shi chen's biography, Ming shi 299.

Li Shi chen began the compilation of the Pen ts'ao kang mu in 1552, and after 26 years' labour he completed it in 1578. He wrote out the manuscript three times before he was satisfied to give it out as complete. The author died before it was published, and his son 李建元 *Li Kien yüan* presented the manuscript to the Emperor, in 1596, who ordered it to be printed. Several editions have successively been issued. The earliest now extant is, it seems, that of Shun chi 15 (A. D. 1658). All editions which I have had an opportunity of examining are printed on indifferent paper and are full of misprints, which make the book very inconvenient for reference. The original edition of the Pen ts'ao kang mu was headed by a preface from the pen of 王世貞 *Wang Shi chen*, and dated 1590. It is followed by another preface by Li Shi chen's son, dated 1596, and after this by a general index of the 52 books (chapters) of the work, enumerating the 16 divisions and the 62 classes under which the whole matter is arranged.

We find next two books of pictorial illustrations which, it would appear, have been borrowed from previous works. These wood-cuts, amounting in number to more than 1100, represent minerals, plants, and animals. But they are so rude that it is very seldom that any conclusion can be drawn from them.

The first chapter is taken up with a list of the works and authors, from whom extracts have been made by Li Shi chen for the compilation of the Pen ts'ao kang mu. It begins with a critical review of the 42 capital works on Materia medica published at different times, and then gives a dry list of medical authors and works, and miscellaneous historical, geographical, and other publications, 950 in number. I shall speak more in detail of this list in another chapter.

The next chapter is devoted to introductory observations on

¹⁸ Previously he had been Offerer of Sacrifices at the Court of one of the Imperial princes (楚王府奉祠).

Materia medica, the nature and properties of medicines, and to general directions for their prescription. The Chinese system of Pharmacology is explained in this chapter. Many quotations from the early writers on the subject are given, illustrating the views entertained up to the present time by the Chinese on the medical virtues of drugs.

The 3rd and 4th chapters comprehend an enumeration of the various diseases, and the medicines suitable for their treatment (百病主治藥).

The rest of the Pen ts'ao kang mu, chapters 5—52, is occupied by accounts of drugs and natural objects, and their use as medicines. These are arranged under 16 部 *pu* or divisions, and 62 類 *lei* or classes, which comprise in all 1892 種 *chung* or species. 374 of the latter are recorded for the first time by Li Shi chen. 8160 prescriptions are given in connection with these drugs.

The 16 *pu* or divisions are :

A. Inanimate substances.

- | | | |
|---|---|-------------|
| <ol style="list-style-type: none"> 1. Water. 2. Fire. 3. Earth. 4. Metals and Stones. | } | Chap. 5—11. |
|---|---|-------------|

B. Plants. Chap. 12—36.

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Herbs. 2. Grains. 3. Vegetables. 4. Fruits. 5. Trees. | <p>One chapter (37) is devoted to garments and domestic utensils appertaining to medicine.</p> |
|--|--|

C. Animals. Chap. 38—52.

1. Insects.
2. Scaly Animals (Dragons, Serpents, Fishes).
3. Shelly Animals (Tortoises, Mollusks).
4. Birds.
5. Quadrupeds.
6. Man.

To convey some idea of the manner in which plants are grouped in the Pen ts'ao kang mu I subjoin a synoptical table of the botanical section of the work, giving the scientific names of some of the plants recorded there under the different divisions.

I. 草部 *Ts'ao pu.* Herbs.

1. 山草 *Shan ts'ao.* Mountain plants. 78 species.

Ginseng.	Scrophularia.
Liquorice.	Poterium officinale.
Sophora flavescens.	Salvia miltiorhiza.
Adenophora.	Lithospermum erythroxyllum.
Platycodon grandiflorum.	Scutellaria viscidula.
Polygonatum officinale.	Bupleurum falcatum.
Anemarrhena asphodeloides.	Angelica.
Orobanche, various spec.	Dictamnus Fraxinella.
Atractylis chinensis.	Narcissus Tazetta.
Polypodium Barometz.	Gentiana.
Other Ferns.	Asarum.
Polygala sibirica and tenuifolia.	Polygonum Bistorta.

2. 芳草 *Fang ts'ao.* Fragrant plants. 60 species.

Pæonia albiflora.	Cyperus rotundus.
Pæonia Moutan.	Jasminum Sambac.
Various kinds of Cardamom.	Jasminum officinale.
Long Pepper.	Lawsonia alba.
Betel Pepper.	Blumea balsamifera.
Nutmeg.	Mentha arvensis.
Turmeric.	Perilla ocimoides.
Galangal.	

3. 隰草 *Shi ts'ao.* Marsh plants. 137 species.

Chrysanthemum indicum.	Achyranthes aspera.
Aster, various spec.	Ophiopogon japonicus.
Artemisia vulgaris.	Hemerocallis graminea.
Artemisia annua.	Commelyna communis.
Incarvillea sinensis.	Malva verticillata.
Leonurus sibiricus.	Althæa rosea.
Inula chinensis.	Solanum nigrum.
Carthamus tinctorius.	Physalis Alkekengi.
Saffron.	Jasminum nudiflorum.
Carduus crispus.	Petasites japonicus.
Bœhmeria nivea.	Cassia Sophera.
Sida tiliæfolia.	Kochia scoparia.
Trigonella Fœnum græcum.	Dianthus Seguieri.
Iris oxypetala.	Lychnis grandiflora.
Arctium Lappa.	Calendula officinalis.
Xanthium Strumarium.	Plantago major.
Carpesium abrotanoides.	Various Indigo plants.
Siegesbeckia orientalis.	Polygonum orientale.
Arundo Phragmites.	P. aviculare.
Musa sapientium.	Tribulus terrestris.
Equisetum arvense.	Fragaria.
Juncus effusus.	Bidens.
Rehmannia glutinosa.	

4. 毒草 *Tu ts'ao*. Poisonous plants. 54 species.

Rhubarb.
Phytolacca acinosa.
Euphorbia, various spec.
Ricinus communis.
Veratrum album.
Aconitum, various spec.
Arum.
Pinellia tuberifera.

Pardanthus chinensis.
Funkia alba.
Balsamine hortensis.
Datura alba.
Rhododendron.
Hyosciamus niger.
Ranunculus sceleratus.
Rhus.

5. 蔓草 *Wan ts'ao*. Climbing or creeping plants. 113 species.

Cuscuta.
Schizandra chinensis.
Rubus.
Duchesnia fragaroides.
Quisqualis indica.
Muricea cochinchinensis.
Aristolochia.
Pharbitis triloba.
Ipomœa.
Bignonia grandiflora.
Rosa indica.
 Monthly Rose.
Trichosanthes palmata.

Thladiantha dubia.
Pueraria Thunbergiana.
Wisteria chinensis.
Asparagus lucidus.
Roxburghia.
Polygonum multiflorum.
Smilax China.
Rubia cordifolia.
Akebia quinata.
Metaplexis Stauntonii.
Humulus japonicus.
Ficus stipulata.
Lonicera chinensis.

6. 水草 *Shui ts'ao*. Water-plants. 29 species.

Alisma Plantago.
Acorus Calamus.
Typha.
Hydropyrum latifolium.
Lemna minor.

Marsilea quadrifolia.
Pistia stratioides.
Limnanthemum peltatum.
L. nymphoides.
Myriophyllum spicatum.

7. 石草 *Shi ts'ao*. Plants growing on rocks or in stony places. 27 species.

Dendrobium moniliforme.
Niphobolus Lingua.
Lycopodium, various spec.
Sedum alboroseum.

Sedum, various spec.
Saxifraga sarmentosa.
Oxalis corniculata.

8. 苔 *T'ai*. Various Mosses. Lichen, and the like. 18 species.

Selaginella involvens.

9. 雜草. Miscellaneous plants not used in medicine. 162 species.

II. 穀部 *Ku pu*. Grains.1. 麻麥稻類 *Ma mai tao lei*. Hemp, Wheat, Rice, and the like. 9 species.

Sesamum indicum.
Cannabis sativa.
 Wheat.

Barley.
 Buckwheat.
 Rice.

2. 稷粟類 *Tsi su lei*. Millet, and the like. 17 species.

Panicum miliaceum,
Sorghum.
Maize.
Panicum italicum.
Eleusine coracana.

Echinochloa crus galli.
Agriophyllum gobicum.
Coix lachryma.
Papaver rhoeas.
Opium.

3. 菽豆 *Shu tou*. Leguminous plants. 13 species.

Soja bean.
Phaseolus radiatus.
Pisum sativum.

Vicia faba.
Dolichos sinensis.
Lablab.

4. Articles of food prepared from grains and pulse. Bean-curd, boiled rice, wine, yeast, bread and congee.

III. 菜部 *Ts'ai pu*. Kitchen herbs.

1. 葷辛類 *Hun sin lei*. Strong smelling or pungent Vegetables. 38 species.

Allium odorum.
A. fistulosum.
Garlic.
Brassica chinensis.
Br. napus.
Sinapis.
Raphanus sativus.

Ginger.
Chrysanthemum coronarium.
Coriandrum sativum.
Daucus carota.
Fennel.
Star Anis.

2. 柔滑類 *Jou hua lei*. Soft and mucilaginous Vegetables. 46 species.

Spinacia oleracea.
Ipomœa reptans.
Beta vulgaris.
Capsella bursa pastoris.
Medicago sativa.
Amaranthus Blitum.
Portulacca oleracea.
Sonchus arvensis.
Lactuca sativa.
Taraxacum officinale.
Basella rubra.

Houttuynia cordata.
Edible Fern (*Pteris aquilina*).
Chenopodium album.
Colocasia esculenta.
Dioscorea sativa.
Batatas edulis.
Lilium tigrinum.
L. concolor.
Stachys affinis.
Bamboo-sprouts.

3. 蒔菜 *Lo ts'ai*. Vegetables producing fruits on or near the ground. 12 species.

Brinjals.
Bottle-gourd.
Benincasa cerifera.
Pumpkins.

Gourds.
Cucumber.
Luffa ægyptiaca.
Momordica charantia.

4. 水菜 *Shui ts'ai*. Aquatic Vegetables. Fuci, Algæ, etc. 6 species.

5. 芝栢 *Chi rh*. Mushrooms. 31 species.

IV. 果部 *Kuo pu.* Fruits.

1. 五果 *Wu kuo.* The five fruits.¹⁹ Cultivated or garden fruits. 16 species.

Plum.
Apricot.
Peach.

Chestnut.
Zizyphus vulgaris.

2. 山果 *Shan kuo.* Mountain fruits. 36 species.

Pyrus sinensis.
P. baccata.
P. spectabilis.
Cydonia sinensis.
Crataegus pinnatifida.
Diospyros kaki.
D. lotus.
Punica granatum.
Various Oranges.
Pumelo.
Citrus digitata.

Citrus japonica.
Eriobotrya japonica.
Myrica sapida.
Prunus pseudocerasus.
Pr. tomentosa.
Salisburia adiantifolia.
Walnut.
Corylus.
Quercus chinensis.
Other species of *Quercus.*

3. 夷果 *I kuo.* Foreign fruits.²⁰ 40 species.

Nephelium litchi.
N. longan.
Canarium album.
C. pimela.
Phyllanthus emblica.
Averrhoa carambola.
Torreya nucifera.
Pinus koraiensis (Seeds).
Areca catechu.

Cocos nucifera.
Borassus flabelliformis (Palm-wine).
Persian Dates.
Caryota urens.
Artocarpus integrifolia.
Ficus carica.
Various other Figs.
Nephelium lappaceum.
Hovenia dulcis.

4. 味類 *Wei lei.* Aromatics. 17 species.

Zanthoxylum Bungei.
Z. piperitum and other spec.
Black Pepper.

Daphnidium cubeborum.
Rhus semialata.
Tea shrub.

5. 蔬類 *Lo lei.* Plants producing their fruits on (or near) the ground. 10 species.

Melons.
Water-melons.
Grapes.

Wild Vine.
Sugar-cane.

¹⁹ According to Li Shi chen the term *wu ku*, the five (principal, cultivated) fruits of China occurs first in the 素問 *Su wen*, the oldest medical treatise attributed to Emperor Huang ti.

²⁰ At first sight it would seem singular that Lichi's and Lungans, *Canarium album* and *C. pimela* and other species, growing exclusively in China and not found elsewhere, are classed among foreign fruits. But this arrangement dates evidently from an early time, when the southern provinces of modern China were first conquered (3rd century B. C.) and their productions became first known in the Empire. Compare above note 3a.

6. 水果 *Shui kuo*. Aquatic fruits. 6 species.

Nelumbium speciosum,		Trapa.
Euryale ferox.		Eleocharis tuberosa.

7. Various fruits not used in medicine. 22 species.

Spondias.		Cookia punctata.
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V. 木部 *Mu pu*. Trees.

1. 香木 *Hiang mu*. Aromatic trees. 41 species.

Thuja orientalis.		Olibanum.
Pinus sinensis.		Myrrh.
Cunninghamia sinensis.		Dragon's-blood.
Cassia-bark, various spec		Sticklac.
Magnolia Yülan and other spec.		Rose maloos.
Cloves.		Benjamin.
Sandalwood.		Borneo Camphor.
Persea nanmu.		Chinese Camphor.
Laurus camphora.		Asafoetida.
Daphnidium myrrha.		Aloës.
Liquidambar formosana.		

2. 喬木 *K'iao mu*. Stately trees. 60 species.

Magnolia hypoleuca ?		Salix babylonica.
Cedrela sinensis.		Tamarix chinensis.
Ailantus glandulosa.		Populus alba.
Rhus vernicifera.		P. suaveolens.
Catalpa Bungei.		Ulmus pumila.
Elæococca verrucosa.		Cæsalpinia sappan.
Melia Azedarach.		Ebony.
Sophora japonica.		Betula.
Acacia Julibrissin.		Rosewood.
Gleditschia sinensis.		Chamærops Fortunei.
Gymnocladus chinensis.		Stillingia sebifera.
Sapindus Mukorossi.		Croton tiglium.
Kœlreuteria paniculata.		Gynocardia odorata.
Gallæ turcicæ.		Abrus precatorius.
Terminalia Chebula.		

3. 灌木 *Kuan mu*. Trees with dense foliage. 53 species.

Morus alba.		Lycium chinense.
Broussonetia papyrifera.		Vitex incisa.
Aegle sepiaria ?		Hibiscus syriacus.
Gardenia florida.		H. mutabilis.
Zizyphus lotus.		Camellia japonica.
Rosa sinica.		Chimonanthus fragrans.
Prunus japonica.		Gossypium.
Ligustrum lucidum.		Eriodendron anfractuosum.
Hedera scandens.		Buxus.

4. 寓木 *Yü mu*. Parasitic plants on trees.

Pachyma pinetorum.		Viscum or Loranthus.
Mylitta lapidescens.		

5. 苞木 *Pao mu*. Bamboos.

6. Miscellaneous trees. 27 species.

The Pen ts'ao kang mu being properly a *Materia medica*, the greater part of its chapters, devoted apparently to natural history, is filled with medical discussions and prescriptions; the notices regarding the habits, form and locality of natural products, and their application for economic purposes, the only items which have any interest for us, are merely appendages to them.

Li Shi chen, in treating of the several kinds of natural objects, minerals, plants, animals, etc., follows in every case the same system. Each drug is headed by its most common name, written in large characters. The names of the authors and works quoted are for the most part in brackets. The matter relating to each article is divided into paragraphs. The first contains the name and the synonyms of the plant, indicating the works where these names first occur. The second, 釋名 (explanation of names), gives the etymology of the names. In the third, 集解, we find, besides the botanical description, statements regarding the history and the native locality of the plant, its use for economical or industrial purposes, and other particulars of interest. In some cases, under the heading 正誤, there are corrections of errors and instructions for preventing the improper use of the article as a medicine. In the fourth paragraph, 修治, the mode of preparing the officinal parts of the plant for medical use is detailed. In the fifth, 氣味, taste and smell, the qualities of the air and the nature of the drug are noticed.²¹ It is also stated here whether

21 According to the ancient *Materia medica* of Shen nung the 四氣 *sz' k'i* are the four conditions of temperature, according to which the drugs have the properties of

寒 *han*, cold

溫 *wen*, warmth

熱 *je*, heat

涼 *liang*, coolness.

But other ancient medical authorities understand by *sz' k'i* the four smells. K'ou tsung shi (12th century) observes that cold, heat, warmth and coolness are properly the 四性 *sz' sing*, or four natures. The four smells are the following:

香 *hiang*, fragrant

腥 *sing*, frouzy (?)

臭 *ch'ou*, fetid

臊 *tsao*, rank (?)

The following examples are adduced:

Gypsum is considered a drug of a cold nature; Cassia-bark is hot; *Pinellia tuberifera* is warm; Peppermint is cool.

Fragrant smell: Aloe-wood, Sandal-wood, Camphor, Musk.

Fetid smell: Garlic, *Asafœtida*.

Frouzy smell: Fowls, Fish, Ducks, Snakes.

Rank smell: Foxes, Human excrement.

the drug possesses poisonous properties or not. In the sixth paragraph, 主治, masterly operations, the specific virtues of the drug as a medicine are enumerated. In the seventh, 發明, is given a clear exposition of its uses. In the eighth, 附方, there is a list of recipes, with the names of the maladies for which the drug is used as a remedy.

It may be well to say here a few words on Chinese names of Plants. These names consist generally of one character, but frequently of two or three characters. 15 out of the 214 Radicals under which all the Chinese characters are grouped in Chinese dictionaries, denote plants or parts of them; and their combinations with other characters form the greatest part of the names of plants occurring in Chinese books. These botanical radicals are:

艸 or 艸 *ts'ao*, Herb (140). This has 1423 combinations. For instance: 艾 *ai*, Artemisia; 茗 *ming*, the book name of Tea; 茜 *ts'ien*, *Rubia cordifolia*.

木 *mu*, Wood (75).—1232 combinations. The names of most trees are to be found under this radical.—柞 *tso*, Oak; 榛 *chen*, Hazelnut.

The radical characters 禾 *ho*, Paddy, Corn (115), 米 *mi*, Rice, (119), 麥 *mai*, Wheat (199), and 黍 *shu*, Millet (202), and their combinations, form the names of most kinds of corn. For instance: 稻 *tao*, Rice; 粟 *su*, a kind of Millet; 粳 *mou*, Barley.

The radical 瓜 *kua* (97) and its compositions relate almost exclusively to Cucurbitaceous Plants, Cucumbers, Melons, Gourds; whilst the radical 豆 *tou* (151) is appropriated to Leguminous Plants.

The radical 麻 *ma* (202) denotes Hemp; the radical 竹 *chu* (118) Bamboo; the radical 韭 *kiu*, Leeks; the radical 支 *chi*, Branch; the radical 馨 *ch'ung*, Fragrant Herbs.

As has been stated, each plant is usually denoted by a peculiar character; e. g. 柿 *shi*, *Diospyros Kaki*; 芡 *k'ien*, *Euryale ferox*;

The Shen nung Pen ts'ao king enumerates also the 五味 *wu wei*, or five tastes of drugs. viz.:

酸 *suan*, sour.

鹹 *hien*, salt.

甘 *kan*, sweet.

苦 *k'u*, bitter.

辛 *sin*, pungent.

茶 *ch'a*, Tea. The Jujube is denoted by the character 棗 *tsao*, which is formed by two characters 束 *ts'z'*, meaning thorn. It is, as the Pen *ts'ao kang mu* explains, on account of the prickled appearance of the tree.

The plants, which enjoy a great renown for their utility, have even peculiar characters for their distinct parts. According to the ancient dictionary *Rh ya* (see above) the root of *Nelumbium speciosum* is called 藕 *ou*—the leaves and the stalks together 荷 *ho*—the stalk 茄 *kia*—the lower part of the stalk, being in the mud, 莖 *mi*—the leaf 葭 *hia*—the bud of the flower 蕾 *t'an*—the seeds with the spongy testa 蓮 *lien*—the white seed without the testa 蒴 *ti*—the cotyledons with the plumule within the seed 薏 *i*. As is known the common name of this plant is 蓮花 *lien hua*.

The male plant of the common hemp, *Cannabis sativa*, 麻 *ma*, is designated by the character 枲 *si*; whilst the female (seed bearing) plant is 苴 *tsü*.

The characters which express the name often relate to the appearance of the plant, its properties, etc. Thus *Physalis Alkekengi*, the winter-cherry, is 紅姑娘 *hung ku niang*, red girl, on account of the red leafy bladder which encloses the ripe fruit.—*Celosia cristata*, Cockscomb, bears a name of the same meaning in China, 鷄冠 *ki kuan*.—*Arachis hypogæa*, the ground-nut, is called 落花生 *lo hua sheng* (the flowers fall down and grow), as its Greek specific name also denotes; the fruit growing (seemingly) in the ground. After the fall of the flower the fruit curves downwards and the pod ripens in the ground.—The *Chimonanthus fragrans* is termed 臘梅 *la mei*, prunus of the 12th month, for in China its flowers appear in winter.—On account of the early appearance of its flowers in spring, *Jasminum nudiflorum* is called 迎春花 *ying ch'un hua* (flowers which go to meet the spring).—*Lilium tigrinum* bears the Chinese name 百合 *po he* (hundred together), owing to the numerous scales which form the bulb. This bulb is largely used for food in China.—The common name of *Euryale ferox* is 鷄頭 *ki t'ou* (fowl's head). Anybody who has seen the fruit of this plant will agree that the Chinese name is very significative.—The name of 絨花樹 *jung hua shu* (silk-

flower tree) is applied to *Albizzia Julibrissin*. The latter specific name is a corruption of the Persian *gul i abreshum*, meaning also silk-flower. This name is given on account of the silky appearance of the long stamens.

There are in China a considerable number of cultivated plants which have been introduced from foreign countries, especially from India, Central and Western Asia. The Chinese have often tried to render the foreign names of these plants by Chinese sounds. The *Pen ts'ao kang mu* frequently quotes Sanscrit names (梵 *fan*). Thus the 娑羅 *so lo* is the *Shorea robusta*, *sal* or *sâla* in Sanscrit. Buddha is said to have died under a Sal tree, for which reason the tree is also styled 天師栗 *t'ien shi li* (Chestnut of the heavenly preceptor). But as there are no Sal trees in China the Buddhist priests in the temples usually cultivate *Aesculus chinensis* under the above names.—The Sanscrit name of Sandalwood, *chandane*, is rendered in the *Pen ts'ao kang mu* by the sounds 旃檀 *chan tan*.—The Jack-fruit, *Artocarpus integrifolia*, is termed 波羅密 *po lo mi* in Chinese. This is evidently a transcription of the Sanscrit *paramita*, excellent.—The *Pen ts'ao kang mu* speaks of a Western Asiatic plant 撒法郎 *sa fa lang*, and the particulars given about this plant leave no doubt that Saffron is meant.

The plant 胡盧巴 *hu lu pa*, cultivated in China and said to be of foreign origin, is apparently *Trigonella fœnum græcum*, *hulba* in Arabic.²²

The descriptive details of plants as found in the *Pen ts'ao kang mu* and other treatises of this class are generally meagre and unsatisfactory. The time of flowering and the colour of the flowers are always noted; but the other particulars are insufficient, because the Chinese, in speaking of the parts and organs of plants, have no botanical terminology, the leaves, flowers, fruits, etc. being described by comparison with the same organs of other Chinese plants, frequently unknown to European readers. This was however also the mode of describing plants adopted by the celebrated Dioscorides (first century of our era), and followed by our

²² At least in Japan the above Chinese name is applied to a variety of *Tr. fœnum græcum*. Franch. Sav. Enum. pl. japon. I. 95.—So mo kou XIV. 18, 19.

botanists down to the time of Linnæus. Comp. *e. g.* Plukenet's *Amaltheum botan.* 1705.

The descriptions of plants given by Li Shi chen consist for the most part of successive quotations from authors of various times, and in this regard again present an analogy to the treatises on *Materia medica* of early Western authors. See for instance Ebn Baithar's (13th century) great work on Medicines and Aliments (German translation by Sontheimer, 1840). Finally Li Shi chen gives also his own opinion on the subject treated of; and it may be said that his view is generally the most reasonable of all.

The Chinese possess very little talent for observation, or zeal for truth, the principal requirements of the naturalist. The Chinese style is inaccurate and often ambiguous. In addition to this they have an inclination to the marvellous, and their opinions and conclusions are frequently puerile. But notwithstanding these deficiencies, met also in all the other branches of Chinese literature, their works on botany, if critically studied and rightly understood and appreciated, will be found to be replete with interest, and to present much valuable information, especially in elucidating the history of cultivated species. These treatises have no less claim to be translated into European languages and to be commented upon than the works of Theophrastus, Dioscorides, and Plinius.

Let me now consider the difficulties which the student of the *Pen ts'ao kang mu* must overcome in order to understand clearly the information furnished in this and other Chinese botanical works.

The first difficulty that arises is to find out where to look for the plant about which information is required. Chinese botanical works note from 5000 to 6000 names of plants, the synonyms of each plant being for the most part numerous. The Chinese have nothing similar to the alphabetical indexes of our comprehensive works. I have therefore been obliged to draw up for the convenience of my own studies alphabetical indexes of all Chinese names of plants and synonyms, according to the sounds of the Chinese characters, not only for the *Pen ts'ao kang mu*, but also for the other more important Chinese treatises on Botany.

It cannot be said that the style of Chinese writers on botanical

matters presents difficulties to European readers acquainted in some degree with the language. In describing plants the authors use for the most part always the same terms. The chief obstacles encountered by European inquirers studying these writings will be found to consist in the right interpretation of geographical names which occur, and in ascertaining the time when the quoted works were composed. The satisfactory elucidation of these important questions requires extensive preliminary studies in Chinese Geography, especially Historical Geography, and Bibliography. I need hardly say that for investigations of this kind very little assistance can be expected from our Chinese teachers, whose erudition seldom extends beyond the classics.

Li Shi chen compiled the Pen ts'ao kang mu from about 1000 ancient and more recent works, not only medical and botanical, but also historical, geographical, philosophical, poetical, etc. As I have stated above the author gives a dry list of these works without other explanation; and in mentioning works or authors he never gives the whole title, but frequently only one character of the author's name is quoted. In consulting the Pen ts'ao we meet frequently in brackets with the characters 頌曰 *Sung yüe* (Sung says). The character sung means properly a eulogy, but here it denotes the author 蘇頌 *Su Sung*, who wrote the *T'u king pen ts'ao* (see above No. 24). More examples of this kind, quoted from the Pen ts'ao, will be found in another chapter of this paper, where I shall give an alphabetical list of works and authors appearing in that treatise.

On a previous page we have already drawn attention to the importance for our investigations of knowing the time when the quoted works were written. We may add here that this question must be also elucidated for the purpose of determining the localities mentioned in Chinese botanical writings. At all times the Chinese have endeavoured to complicate all branches of their knowledge, so that they themselves do not find their way easily. They seem to place the value of their sciences in this intricacy. It is known that from ancient times each of the Chinese Emperors bore, besides his dynastic name, a name for his reign, and this latter was often changed. There are Emperors who are registered in history with from 10 to 15 names, each composed of at least

two characters. The Chinese authors, in citing dates, refer to these reign-names of the Emperors, which correspond to our ciphers, to designate the dates. In the same manner the Chinese have at all times liked to change the names of their provinces, cities, etc. Almost every dynasty, on succeeding to the throne, has changed the names of most of the cities and also of the provinces of China. Thus every city has borne different names at different periods. But as the number of characters to designate geographical names is limited, and as certain characters are particularly in favour for names of departments or districts, it happens very often that one geographical name is applied to a great number of places. For instance 西平 *Si ping* is now-a-days the name of a district in the province of Honan. At the time of the Han it was the name of a district in the present Anhui; at the time of the Tsin a district in Kansu. During different periods of Chinese history the same name was applied to districts in Yün nan, Sz' ch'uan, and Hu pei.—永昌 *Yung ch'ang*, now-a-days a prefecture in Yün nan, has borne this name since the 5th century. During the Mongol period the same name was given to a prefecture in the province of Kansu. There are several other cities in China which at different times have borne the name of Yung ch'ang.—The name of a province 江南 *Kiang nan* (the two characters meaning south of the river) occurs frequently in the pages of the Pen ts'ao. Here it does not mean the country south of the Yellow River, so called under the present dynasty (provinces of Anhui and Kiang su), but it is to be understood as the Kiang nan province of the T'ang dynasty, south of the Yang tsz' kiang, comprising the greatest part of the modern provinces of Fukien and Kiang si.—In like manner the province of 河南 *Ho nan* of the T'ang period does not correspond to the province of this name to-day, for it occupied the greater part of the modern Shan tung. Ho nan likewise means south of the river, but here the Yellow River is intended, which then emptied itself into the Gulf of Pechili, as it has done for some thirty years past.—The name 南海 *Nan hai* (Southern Sea) referred in ancient times to the Eastern part of the modern Kuang tung province, but sometimes the Chinese also understand by this name the Archipelago and the Indian Ocean.

It is clear that the greatest geographical errors can be committed by the reader unacquainted with the time at which the respective Chinese author, referring to names of countries and places, wrote. In the year 1842 E. Biot published a useful book, *Dictionnaire des noms anciens et modernes des Villes etc. dans l'Empire Chinois*. It is translated from the 廣輿記 *Kuang yü ki*, a small geographical account of the Empire, and arranged in alphabetical order; but it proves to be insufficient for determining the geographical names, occurring in the Pen ts'ao. As far as only the names of Chinese cities at different times are concerned I would recommend for reference a very complete Chinese Geographical Dictionary, the 歷代地理志韻編今釋 *Li tai ti li chi yün pien kin shi*, in 20 books, published in 1837. The names of Chinese cities, ancient and modern, are arranged in it according to a Chinese system under about 1600 characters. It is not quite easy to find a name in this book, but by arranging these 1600 characters according to the radicals (as I have done for my own use) it can be made more practicable for consultation. But in this work we find only ancient and modern names of Chinese departments and districts, whilst ancient Chinese writers on botany in giving the stations of plants frequently mention provinces, the names of which have also been repeatedly changed in course of time. This want is in some degree met by the new edition of the *Li tai ti li chi*, etc., published in 1872, by 李鴻章 *Li Hung chang*, the well-known Viceroy of Chihli. In this edition a series of historical maps referring to the political divisions of China under the different dynasties has been added. More detailed information on the subject may be found in an elaborate compilation of historical maps of China, which came to light in 1879 (Tung hu hien, Hu pei) with the title 歷代輿地沿革險要圖 *Li tai yü ti yen ko hien yao t'u*. It comprises 68 maps drawn up according to the geographical sections in the Dynastic Histories.

In the Pen ts'ao occur also frequently names of ancient countries not included in China. These must be sought for in the Histories of the various Chinese Dynasties, which generally contain at the end notices of foreign countries.

THE 廣羣芳譜 KUANG K'ÜN FANG PU.

This work, the Chinese title of which may be translated: Enlarged Thesaurus of Botany, is a very valuable treatise on Botany, dealing with cultivated as well as with wild plants. The original work was published in 1630 under the title of 羣芳譜 *K'ün fang pu*, 'Thesaurus of Botany, in 30 books, by 王象晉 *Wang Siang tsin*. In 1708 a revised and enlarged edition was completed and printed by Imperial order with the above title *Kuang K'ün fang pu*, in 100 books. This is divided into 11 sections (部 *pu*) under the following heads:

1. 天時 *T'ien shi*. The Heavens, the Seasons of the year.
2. 穀 *Ku*. Grains, Beans.
3. 桑麻 *Sang ma* (literally: Mulberry-tree and Hemp). Textile Plants.
4. 蔬 *Shu*. Vegetables.
5. 茶 *Ch'a*. Tea.
6. 花 *Hua*. Flowers.
7. 果 *Kuo*. Fruits.
8. 木 *Mu*. Trees.
9. 竹 *Chu*. Bamboos.
10. 卉 *Hui*. Herbs.
11. 藥 *Yao*. Medicinal Herbs.

The number of species described in the *Kuang K'ün fang pu* amounts to about 1700. It contains much new information not found in the *Pen ts'ao*, drawn from ancient and later authors. There are no illustrations in it, but its great superiority lies in the splendid type. The matter is treated in much the same way as in other Chinese works of this kind. The author gives first some short original account of each plant, which is followed by a series of quotations from authors and works of various times on the subject. These quotations are arranged under three heads, printed in white characters on black ground, and numerous subdivisions, in brackets, as also the names of works and authors quoted.

1. 彙考 *Hui k'ao*. Under this head are comprised quotations from the Classics, Histories of the Dynasties, Biographies, the

works of the Chinese philosophers, Geographical works, Descriptions of the Chinese provinces, departments, etc. The time of these publications is never given, nor are the quotations arranged chronologically.

2. 集藻 *Tsi tsao*. Fine composition, elegant writing. Under this head, which comprises the greater part of the extracts given, we meet with quotations from a great number of poetical compositions. The matter is arranged in chronological order, and the dynasties during which the quoted authors wrote are always indicated. For the headings of the numerous subdivisions under which the quotations appear see Mr. Wylie's Notes on Chinese Literature, p. 188—192, where the various forms of Chinese poetry are detailed.

3. 別錄 *Pie lu*.²³ This comprises principally quotations from authors on agriculture and on the economic use of plants.

The characters 原 and 增, likewise printed white on black ground, indicate, the first the original matter of the K'ün fang pu, the second the additional information given in the Kuang K'ün fang pu.

THE BOTANICAL SECTION OF THE 圖書集成 T'U SHU TSI CH'ENG.

Eighteen years after the publication of the Kuang K'ün fang pu, in 1726, the vast Compendium of Chinese Literature known under the above name,²⁴ was drawn up under Imperial authority.

The Botanical Section of this gigantic compilation, 草木典 *Ts'ao mu tien*, comprises 320 books. As it exists in the library of the Russian Legation at Peking, I have had ample opportunity

²³ This term is not to be confounded with the *Pie lu* frequently quoted in the *Pen ts'ao*. As we have seen above (No. 7) this is the abbreviated title of an ancient *Materia medica*.

²⁴ Readers who are desirous of further information about this magnificent work may find it in W. F. May's paper: Bibliography of the Chinese Imperial Collections of Literature, the last publication from the able pen of this distinguished and lamented scholar. It appeared in Vol. VI of the *China Review*, 1878. On p. 218 the author gives a review of the *Tu shu tsi ch eng*, or as its full title reads 古今圖書集成 *Ku kin Tu shu tsi ch eng*, i. e. Compendium of Literature and Illustrations, Ancient and Modern. A complete copy of the work was acquired in 1878 by the British Museum. The Great Library at Paris is said to possess some portions of it.

of referring to it. It has a good claim to be regarded as the most complete collection of Chinese records on botanical matters extant, and its having been printed with large moveable copper types on excellent paper renders it especially useful for reference. A great number of rare or now lost ancient botanical records and treatises on agriculture have been reproduced in it; and the whole matter of the Pen ts'ao kang mu, cleared from mistakes, is also found there. The pictorial illustrations accompanying the accounts of the various plants seem to have been drawn from all available sources in previous Chinese pictorial works on botany. They are much better than those in the Pen ts'ao, but with a few exceptions they have no great value. Some of them can be traced to the Kiu huang pen ts'ao (see above No. 35).

The matter under each plant is invariably arranged in the following order—not very intelligible to European minds.

1. Under the head of 彙考 *Hui k'ao* the respective text of the principal works on Materia medica, Botany, Agriculture, Horticulture, etc. are reproduced, and generally *in extenso*, for each plant.

2. The head of 藝文 *I wen* deals with literary compositions, poetical works, etc. in which plants are mentioned.

3. 選句 *Süan kü*. Elegant extracts.

4. 紀事 *Ki shi*. Minor historical notices.

5. 雜錄 *Tsa lu*. Miscellaneous notes.

6. 外編 *Wai pien*. Appendices.

Plants in the T'u shu tsi ch'eng are treated in 700 部 *pu* (divisions). It is to be regretted that the time of publication of the quoted works is only given in the case of the literary compositions and poems, although the reason for this omission is not apparent. As regards the quotations under the other heads neither the time is noticed, nor are they chronologically arranged according to date of publication.

THE 植物名實圖考 CHI WU MING SHI T'U K'AO.

This, the most recent work of note on Chinese Botany, and especially remarkable for its drawings, was published in 1848.

It has much attracted the attention of European botanists and sinologues in China, and is now to be found, I think, in all the great libraries of Europe.²⁵

吳其濬 *Wu K'i sin*, the author of this elaborate botanical work, was a scholar and functionary of high distinction during the present dynasty.²⁶ He was a native of 固始 *Ku shi hien*, in Southern Honan. His literary name was 澗齋 *Yu chai*, but in his work he generally styles himself 雋農 *Yü lou nung*, the husbandman of Yü lou.²⁷ He entered public life in 1817. After taking his degree as first-class graduate he commenced his career as Han lin compiler. In 1819 he was appointed Chief Examiner in Kuang tung. In 1831 he entered the Imperial College of Inscriptions; in 1832 he was sent to the province of Hu pei as Provincial Director of Education; and in 1834 he returned to Peking where he successively held several high offices (Director of the State Ceremonial, Sub-Chancellor of the Grand Secretariat, Vice-President of the Board of Rites). In 1837 he was appointed Provincial Director of Education in Kiang si, and in 1838 Provincial Examiner in Che kiang. Subsequently we find him again in the capital as Senior Vice-President of the Board of War, and a year later he held the same office in the Board of Revenue. In 1840 he had risen to be Acting Governor General of Hu kuang, and in the same year he was made Governor of Hunan. In 1842 he fought successfully against the rebels in his province, and soon after this fell ill. In 1843 he was transferred as Governor to Che kiang, and in the same year appointed Governor of Yün nan. He subsequently administered the provinces of Yün nan and Kwei chou as Acting Governor General, but in 1845 he was again removed and transferred to Fu kien as Governor. Soon after he held the same office in Shansi. In 1846

²⁵ I have myself procured at different times in Peking several copies of it, which were sent to London, Paris, Berlin, the United States of America, etc. Fifteen years ago its price in Peking was \$13, but now it can hardly be obtained here for less than \$30, although it is not a very rare book.

²⁶ The biographical details here presented are drawn from a memorandum compiled from official sources and communicated to one of my friends in Peking by an officer of the Tsung li ya men.

²⁷ Yü lou is an ancient name of a district in the province of An hui (Lu kiang hien).

he was again attacked by illness and allowed to retire from his public duties. He died a short time afterwards. The Emperor gave him a posthumous title.

It appears from this dry *curriculum vitæ* that *Wu K'i sün* displayed great activity in his public life. The opportunity he had of making himself acquainted with many provinces of the Empire qualified him to investigate the Chinese Flora. It is however not easily understood how he found leisure to prosecute his favourite studies and to write an extensive work on Botany, illustrated with a large number of drawings.

The *Chi wu ming shi t'u k'ao* is generally in 8 tomes (t'ao). One-half of them, 4 t'ao or 22 (rather voluminous) books, comprise the descriptive portion of the work, and are styled 長編 *Chang pien* by the author. They contain accounts of plants compiled as usual from previous authors, but *Wu K'i sün* introduces also a good deal of new and interesting matter not found in the *Kuang K'ün fang p'u* or the *T'u shu tsi ch'eng*.

The second part, in 38 books, forming also 4 t'ao, is devoted to pictorial illustrations of plants accompanied with short, sometimes also detailed descriptions. These drawings, nearly 1800 in number, are tolerably well executed, especially those delineated by the author himself, apparently from nature. One part of the engravings can be traced to the *Kiu huang pen ts'ao* (see above No. 35). Although the wood-cuts in the *Chi wu ming shi t'u k'ao* cannot be compared, as far as scientific accuracy in delineation is concerned, with those of some Japanese botanical works (of which I shall speak further on), it is undoubtedly the best Chinese pictorial work of this class, and entitled to special attention on the part of students of Chinese Botany.

The *Chi wu ming* etc. was revised and published, it seems soon after the death of the author, by 陸應穀 *Lu Ying ku*, a native of the province of *Yün nan*, who wrote also the preface, which is dated *T'ai yüan fu* (Shansi) 1848. He states that *Wu K'i sün*, having held public offices in different parts of the Empire, had many opportunities of making observations with respect to plants, and of comparing his own experiences with the statements of previous authors. He had at an earlier period composed the first

part of the work, the *Chang pien*, but subsequently was induced to draw up the second or supplementary part, accompanied with drawings, in which the author endeavoured to give the results of his personal observations.

Among the works and authors frequently quoted by Wu K'ü sün I may notice the *Kiu huang pen ts'ao* (see above),—the 花鏡 *Hua king*, published 1688,—the 南越筆記 *Nan yüe pi ki*, an account of the Southern provinces of China, written during the present dynasty,—the 滇南本草 *Tien nan pen ts'ao*, a Herbal of the province of Yün nan (unknown to me).

With this my sketch of the History of Chinese Materia medica and Botany may be brought to a close. I have reviewed only the more important works of this class. Chinese writings on plants are very numerous, both general treatises and monographs on particular plants. These will be shortly noticed in another chapter devoted to Bibliography.

2. CHINESE WORKS ON AGRICULTURE.

The primeval Emperor *Shen nung*, whom the Chinese believe to have composed the first treatise on Materia medica, is also credited with having laid the foundation of Chinese Husbandry. His name implies this tradition, for *Shen nung* means: the Divine Husbandman. It is related in the early records that the people of his age were rude and wholly unacquainted with the advantages of agriculture. They subsisted on fruit, vegetables, and the flesh of birds and beasts. *Shen nung* examined first the quality of the soil, fashioned timber into ploughs and taught the people how to till the ground and raise grain. On a previous page I referred to the mountain in Shan si, where tradition makes him first teach his people the fundamental processes of agriculture. Sz' ma Ts'ien (B. C. 163—85) records in the *Shi ki* (book 1) that *Shen nung* sowed the five kinds (種五莖).—莫玄 *Cheng hüan*, a celebrated scholar of the Han dynasty, A. D. 127—200, explains that the five kinds of cereals, the 五穀 *wu ku*, are meant, namely: 稻 *tao* (Rice), 麥 *mai* (Wheat), 粱 *liang* (*Panicum italicum*), 黍

shu (*Panicum miliaceum*), and 菽 *shu* (Soja bean). The same are also mentioned in the Classics.

It is known that at the time of the vernal equinox the ceremony of ploughing the soil and sowing the five kinds of corn is performed by the Emperor, assisted by the Imperial Princes and the Presidents of the Boards. According to the 大清會典事例 *Ta Ts'ing hui tien shi li*, the great work on the institutes of the government, book 250. 1, where this ceremonial is described, the same cereals are mentioned in connection with it. The Emperor sows the rice, the Princes and the Presidents of the Boards sow the remaining cereals.

Shen nung's son 桂 *Chu* held the office of 稷正, Minister of Husbandry. More than 400 years later 棄 *K'i*, a son of the Emperor *K'u*, filled a similar office. The Emperor *Yao*, B. C. 2356, made him 農帥, Director of Husbandry. He is more generally known under the name of 后稷 *Hou tsi*, Sovereign Millet. The house of the Princes of Chou traced their lineage to him. After his decease he became worshipped like *Chu* as patron of Agriculture (Mayers' Chin. Read. Man. p. 223).

An interesting sketch of the state of ancient Chinese agriculture during the Chou dynasty has been drawn up by E. Biot from the scattered references to the subject found in the Book of Odes. An English translation of this article is found in Dr. Legge's *Shi king*, proleg. p. 149.

As in China agriculture has always been held in the highest estimation, Chinese literature relating to husbandry is represented by a great number of general treatises and monographs on the subject, composed at various times.

THE 種植書 CHUNG CHI SHU.

This seems to be one of the earliest treatises of this class. The author of it was 汜勝之 *Fan Sheng chi*. In the biographical section of the *Ts'ien Han shu*, book 30 (husbandry), will be found a short notice regarding the author. Liu Hiang, the librarian of the Imperial library (first century B. C.) reports that *Fan Sheng chi* held successively several offices during the reign of Ch'eng Ti, B. C. 32—6, and that the Emperor appointed him to teach hus-

bandry in the prefectures surrounding the capital (Ch'ang an near the present Si an fu in Shensi).

The work was in 18 sections (pien). Some quotations from it, found in other ancient works, are all that has come down to us of this ancient treatise, the title of which means "the Book on the Art of Sowing and Planting." Extracts from it are given in the Ts'i min yao shu (see the next), but they only refer to the following cultivated plants :

Common Rice.
Wheat.
Barley.
Panicum miliaceum.
- Echinochloa crus galli. Two varieties, still cultivated in North-China, are mentioned, one of them cultivated in water, the other in dry soil.

Soja bean.
Other leguminous plants.
Lagenaria.
Common Hemp.
- Caladium esculentum.
Mulberry-tree.

THE 齊民要術 TS'I MIN YAO SHU.

This title may be translated: Important Rules for the people to gain their living in peace. It is a work on husbandry, still extant, by 賈思勰 *Kia Sz' niu* (thus the Pen ts'ao, list of works 26, gives the pronunciation of the last character, generally pronounced *hie*). We learn from the Sz' k'u ts'üan shu, C. II. 2, that he was a subject of the After Wei (A. D. 386—534) and prefect of 高平 *Kao p'ing*. (Several cities of this name existed during the Wei in different parts of the Empire.) He seems to have lived in the 5th century. The original work was in 92 *pien* (sections). A part of it was lost a long time ago, and much additional matter by later authors is found in the edition now current, which is in 10 books. It seems that the T'u shu tsi ch'eng reproduces in books V and XV (on planting and felling trees, and cultivating fruits), and under the heads of the respective plants the whole matter of the work, together with the additional notes; but the latter are always separated there from the original text. According to an author of the 12th century, quoted in the Wen hien t'ung k'ao, the edition then extant was already provided with the interpolated notes; and according to 李燾 *Li Tao* (also an author of the Sung) these notes had been added by 孫公 *Sun Kung* (Sung dynasty).

The work of Kia Sz' niu contains many interesting particulars regarding the cultivation of the cereals, vegetables, fruits, trees, etc. then grown in China. It is also of interest on account of its numerous quotations from previous ancient writings now lost.

The following plants treated of in the Ts'i min yao shu can be identified:

- | | |
|--|-------------------------------|
| Common Rice. | Zingiber officinale. |
| Mountain Rice. | Z. Mioga ? |
| Panicum miliaceum. (Two varieties
still cultivated in China.) | Amomum Cardamomum. |
| Setaria italica. | Bitter-seeded Cardamom. |
| Sorghum vulgare. | Other species. |
| Barley. | Betel-pepper. |
| Wheat. | Zanthoxylum, various species. |
| Avena nuda. | Sesame. |
| Buckwheat. | Cannabis sativa. |
| Soja hispida. | Sida tiliæfolia. |
| Abrus precatorius ? | Plants yielding Indigo. |
| Raphanus sativus. | Carthamus tinctorius. |
| Brassica Napus. | Lithospermum erythrorhizon. |
| Br. chinensis. | Gardenia florida. |
| Br. chin. oleifera. | Varnish-tree (Rhus). |
| Various species of Sinapis still culti-
vated in China. | Stillingia sebifera. |
| Lactuca sativa. | Peach. |
| Thlaspi arvense ? | Apricot. |
| Benincasa cerifera. | Prunus domestica. |
| Various Pumpkins and Gourds still
cultivated in China. | Pr. pseudocerasus. |
| Bottle-gourd. | Pear. |
| Cucumis sativa. | Crab-apple. |
| Solanum Melongena. | Pyrus betulæfolia. |
| Batatas edulis. | Diospyros Kaki. |
| Caladium esculentum. | Nephelium Litchi. |
| Hydropyrum latifolium. | N. Longan. |
| Allium sativum. | Myrica sapida. |
| A. fistulosum. | Eryobotrya japonica. |
| A. odorum. | Pomegranate. |
| Other species of Allium. | Oranges. |
| Malva verticillata. | Cydonia sinensis. |
| Rehmannia glutinosa. | Hovenia dulcis. |
| Medicago sativa. | Vitis vinifera. |
| Polygonum orientale. | Wild Vine with edible fruits. |
| Pteris aquilina. | Zizyphus vulgaris. |
| Various Mushrooms. | Chestnut. |
| Nelumbium speciosum. | Hazelnut. |
| Limnanthemum nymphoides. | Banana. |
| L. peltatum. | Sugar-cane. |
| Typha (sprouts eaten). | Phyllanthus emblica. |
| Sea-weed. | Canarium Pimela. |
| Bignonia grandiflora. | C. album. |
| Akebia quinata. | Cocoa-nut. |
| Rhododendron. | Areca Catechu. |
| Poterium officinale. | Morus alba. |
| Celery. | Broussonetia papyrifera. |
| Coriandrum sativum. | Salix babylonica. |
| Perilla ocimoides. | Populus alba. |
| | Ulmus pumila. |
| | Catalpa Bungei. |
| | Sophora japonica. |

Quercus chinensis.
Other species.
Sterculia platanifolia.
Melia Azedarach.
Ficus retusa.

Thuja orientalis.
Palm-tree yielding Sago (Caryota).
Bamboo.
Rattans.

THE 種樹書 CHUNG SHU SHU.

This is another work on husbandry, published some centuries later, which has survived in the form of quotations preserved in later works of that class. The name of its author is 郭橐駝 *Kuo T'o t'o*, who seems to have lived in the 7th or 8th century. All that we know of him is found in a short biographical notice written by the poet *Liu Tsung yüan* (A. D. 773—819. See alph. list 478), who perhaps was his contemporary. This biography is reproduced in the *T'u shu tsi ch'eng*, book VI. *Kuo T'o t'o* was a villager experienced in husbandry. His village was situated in the vicinity of Ch'ang an, the metropolis of China during the T'ang period. His true cognomen is unknown, *T'o t'o* (Camel) being his pseudonym.

The *T'u shu tsi ch'eng* seems to reproduce the whole matter of the *Chung shu shu*. See books V, X, XV, and under the heads of the respective plants. It would be presumed from the title of the work, which means: the Book on the Art of Planting Trees, that it deals only with trees; but in reality it treats also of cereals, vegetables, and fruits; and gives notices of nearly the same plants as the *Ts'i min yao shu*. The following are new:

Phaseolus radiatus.
Melons.
Spinach.
Beta vulgaris.
Papaver Rhœas.
Pæonia Moutan.
P. albiflora.
Jasminum Sambac.
J. officinale.

Olea fragrans.
Mandarin-Orange.
Coolie-Orange.
Other Oranges.
Pyrus malus.
Salisburia adiantifolia.
Pinus sinensis.
Lycium chinense.

The *Chung shu shu* presents a peculiar interest with respect to some curious accounts found in it regarding the art of grafting trees. It has been asserted that the Jesuit missionaries first taught the Chinese to graft trees (see Chambers' Encycl., article: Grafting). But that is a mistake. Grafting was probably practised in China in early times. The ancient Dictionary *Shuo wen*, published A. D. 121, explains the character 接, even now-a-days

the proper term for grafting (sometimes also written 接), by 續木, which can only be translated by grafting. But in Chinese works on husbandry now extant Kuo T'ò t'ò is the earliest author quoted with respect to grafting.

The ancient Greek and Roman authors assert that the vine, the fig-tree, the walnut-tree, the olive-tree, the pomegranate and other heterogeneous trees can be grafted together (see Pliny's Natur. hist.). Although in our days no credit is given to these statements, as all attempts of grafting have failed except among plants of the same genus, or at least of the same natural family,—it is a curious fact that in ancient Chinese writings on agriculture we meet with statements similar to those made by Pliny. Kuo T'ò t'ò asserts, besides the successful grafting of *Broussonetia papyrifera* on *Morus alba* (which is not improbable at all), that Plum-trees yielding sour fruits and Pear-trees can be grafted on the Mulberry-tree, and that by this way a sweet plum and a sweet delicate pear are obtained. He states further that *Prunus domestica* can be grafted on the Peach-tree and *vice versa*—or the Apricot-tree on the Peach-tree, which causes the apricots to increase in size. A Peach-tree grafted on *Diospyros Kaki* is said to produce gold-coloured peaches. Finally we are told in that ancient book that the Pomegranate can be successfully grafted on *Olea fragrans*, and *Prunus* on *Melia Azedarach*. I find also there a statement to the effect that if a Vine be planted so close to a Jujube-tree that the roots of both plants come into contact, the grapes will assume the flavour of the jujube. It is remarkable that a sympathy was supposed to exist between the Vine and the *Zizyphus Lotus* by the gardeners of ancient Babylon. Compare Meyer's *Geschichte der Botanik*, III, 74, Husbandry of the Nabathæans. See also the observations of the Jesuit missionaries in China on the same subject, *i. e.* on the grafting together of heterogeneous trees by Chinese gardeners (My "Early Europ. Res. into the Flora of China," p. 29, 125 [21, 21]).

The 四時纂要 *Sz' shi tsuan yao*. Important Rules for the Four Seasons, in 5 books, is also a production of the T'ang period and frequently quoted in Chinese works on husbandry. The

Wen hien t'ung k'ao, CCXVIII, 3, gives a short bibliographical notice with respect to this work. It is stated there that 韓謬 *Han O*, the author, in compiling these Rules for Husbandry, made use of all preceding writings on the subject.

The 農書 *Nung shu* is a treatise on husbandry in 3 books, written by 陳旉 *Ch'en Fu*, in 1149 A. D. The first part treats of Agriculture, the second of Breeding Cattle, the third of Rearing Silkworms. See Wylie's Notes on Chin. Lit. p. 75. According to the Wen hien t'ung k'ao, CCXVIII, 6, the author was a hermit living in the Western mountains, about the middle of the 12th century.

Another work with the same title 農書 *Nung shu*,²⁸ in 22 books, by 王楨 *Wang Cheng*, was published during the Yüan period (13th or 14th century). This treats with great minuteness of the details of husbandry, and is illustrated by plates, each accompanied by a stanza of poetry. The first six books, 農桑通訣 *Nung sang t'ung küe*, consist of general rules for agriculture. This section is frequently quoted in the Kuang k'ün fang pu and in later works on husbandry, as a separate work. It is followed by the 穀譜 *Ku pu*, on Cereals, 4 books, and then by a series of plates illustrating agricultural implements. See Wylie l. c. p. 76.

Wan Cheng also wrote two monographs on Textile plants, both illustrated by plates, viz.:

The 木棉圖譜 *Mu mien t'u pu*, a treatise on the Cotton plant, and

The 麻苧圖譜 *Ma Ch'u t'u pu*, on Hemp and Grass-cloth plants. This is found reproduced in the Chi wu ming shi t'u k'ao, descr. part IX, 53.

²⁸ A third work with the same title appeared in the beginning of the present dynasty. It was compiled by 張履祥 *Chang Li siang*. It is reprinted in the collection Chao tai ts'ung shu (Wylie l. c. 137).

The 農桑輯要 *Nung sang tsi yao*, another work on the Agriculture of the Yüan period, in seven books, was drawn up by order of Kublai Khan, in 1273. It was then considered a treatise of great importance, and has been several times republished. There are ten divisions on the following subjects: Precepts, Ploughing, Sowing, Planting Mulberry-trees, Rearing Silkworms, Vegetables, Fruits, Bamboo and Forest-trees, Medicinal plants, and Breeding Cattle. (See Wylie l. c. 76.) The preface of the work is by 王盤 *Wang P'an*.

The 農桑衣食撮要 *Nung sang i shi tso yao* is a small treatise, in two books, on the same subjects as the preceding, and intended to supplement the information contained in it. It was written in 1314 by 魯明善 *Lu ming shan*, an Ouigur by birth, and reprinted in 1330 (Wylie l. c. 76).

THE 農政全書 NUNG CHENG TS'ÜAN SHU.

This work, the title of which may be translated by "Complete Treatise on Agriculture," is one of the most important and interesting works on Chinese husbandry extant. It was written by 徐光啓 *Sü Kuang k'i*—literary name: 元扈 *Yüan hu*; posthumous title: 文定公 *Wen ting kung*,—A. D. 1562—1633, a native of 上海 *Shang hai*. See his biography *Ming shi* 251, and Mayers' *Chin. Read. Man.* p. 197. *Sü Kuang k'i* was a distinguished scholar and Minister of State during the reign of Ming Wan li. His interest in scientific inquiry brought him in contact with the Jesuit missionaries at Peking, whom he warmly supported. Mention is repeatedly made of *Sü Kuang k'i* in *Du Halde's Description de la Chine* (III. 76, 79, 82), where he is styled *Paul Siu, Colao*,²⁹ Premier Ministre d'État. His portrait is also given there. He was a friend of Matteo Ricci and was baptized at Nanking. Paul was his Christian name.

The *Nung cheng ts'üan shu* is an excellent and elaborate work on Chinese Husbandry, in sixty books, illustrated by numerous plates. When the author died, in 1633, it was not yet complete.

²⁹ 閣老 *Ko lao*. Grand Secretary.

A certain 子龍 *Tsz' lung* received the manuscript from the author's grandson, and with the assistance of other scholars, he arranged the matter, added some new information, and published the whole in 1640.

The first three books are occupied with quotations from the Classics and other works.

Books 4—5. On the Division of Land.

Books 6—11. On the Processes of Husbandry.

Books 12—20. On Hydraulics. The two last books contain a record of the methods adopted in Europe.

Books 21—24. On Agricultural Implements.

Books 25—30 are devoted to the Art of Planting. Here we find short but characteristic descriptions of cultivated plants and directions for growing them.

Cereals (25—26): *Panicum miliaceum*. Rice, *Panicum italicum*, Sorgho, Maize, *Echinochloa crus galli*, Soja bean, *Phaseolus radiatus*. Vicia Faba, *Pisum sativum*, *Dolichos sinensis*, Lablab, Wheat, Barley, Buckwheat, Sesame.

Cucurbitaceous plants, Water plants, Roots, etc. (27): Cucumber, *Benincasa cerifera*, *Thladiantha dubia*, *Luffa ægyptiaca*. Water-melon, *Solanum melongena*, *Lagenaria*, *Colocasia esculenta*, *Nelumbium speciosum*, *Trapa*, *Euryale ferox*, *Eleocharis tuberosa*, *Sagittaria*, *Hydrocotylum latifolium*, *Dioscorea sativa*, *Batatas edulis*, *Raphanus sativus*, *Brassica napus*, *Daucus Carota*.

Vegetables (28): *Malva verticillata*, *Althæa rosea*, *Basella rubra*, *Brassica rapa*, *Brassica chinensis*, *Allium sativum*, *Allium fistulosum*, *Allium odorum* and other species, Ginger, *Sinapis*, Coriander, Oil-cabbage, Spinach, *Amaranthus Blitum*, *Chrysanthemum coronarium*, *Beta vulgaris*, Celery, Lettuce, *Medicago sativa*, *Perilla ocimoides*, *Polygonum*, *Stachys affinis*, Mushrooms.

Fruits (29, 30): Jujube, Peach, Plum, Apricot, Pear, Chestnut, Hazelnut, Crab-apple, *Diospyros Kaki*, *Diospyros Lotus*, Pomegranate, *Nephelium Litchi* and Longan, *Canarium album* and *Pimela*, *Prunus pseudocerasus*, *Myrica sagida*, *Vitis vinifera*, *Salisburia adiantifolia*, *Eriobotrya japonica*, various Oranges, *Citrus decumana*, *Citrus digitata*, *Citrus japonica*, Mulberry, *Cydonia sinensis*, *Cratægus pinnatifida* and other species, Sugar-cane.

Books 31—34. On Rearing Silkworms.

Books 35—36. On the cultivation of Cotton³⁰ and other Textile plants.

Cotton, *Bœhmeria nivea*, *Cannabis sativa*, *Sida tiliæfolia*, *Pueraria Thunbergiana*.

Books 37—38. On Planting Trees.

Ulmus pumila, *Catalpa Bungeana*, *Pinus sinensis*, *Cunninghamia sinensis*, *Thuja orientalis*, *Juniperus chinensis*, *Cedrela sinensis*, *Zanthoxylum*, *Broussonetia papyrifera*,

³⁰ The chapter on the cultivation of Cotton was translated by C. Shaw, in the *Chinese Repository* XIV (1849) p. 449—469.

Sophora japonica, *Salix babylonica*, *Populus*, *Ligustrum lucidum* and other trees upon which the Wax-insect lives.³¹ *Stillingia sebifera*, Varnish-tree. *Gleditschia sinensis*, *Chamærops Fortunei*, Oak, *Melia Azedarach*, *Pyrus betulæfolia*, *Pyrus spectabilis*, Cocoa-nut tree, *Gardenia florida*, *Quercus spec.*

Books 39—40. On the cultivation of various plants.

Bamboo, Tea-plant, Chrysanthemum, Safflower, Indigo plants, *Lithospermum erythrorhizum*, *Rehmannia glutinosa*, *Lycium chinense*, *Cassia Sophera*, *Polygonatum*, *Lilium tigrinum*, Job's-tears, Plantain, *Hemerocallis graminea*, Brassica, *Limnanthemum*, *Arundo Phragmites*, Typha.

Book 41. Breeding Animals.

Book 42. Manufacture of Food.

Books 43—60. Provision against times of scarcity. In this section the whole matter of the *Kiu huang pen ts'ao* (see above No. 35) with all the drawings is reproduced (books 46—59).

In the last book (60) the 野菜譜 *Ye ts'ai pu*, a small treatise on wild growing Vegetables (60 species), is reprinted. (See alph. list 1077.)

THE 授時通考 SHOU SHI T'UNG K'AO.

This is a comprehensive work on Agriculture and Horticulture and kindred industrial sciences, with numerous illustrations, the most recent work of note of this class. It was compiled by Imperial command and published in 1742, in 78 books. It is well known also in Europe, the great sinologue Stan. Julien having frequently made translations from it. The *Shou shi t'ung k'ao*, however, is nothing but a compilation, made without much critical judgment, from previous works; and very little original matter is found in it. It seems to me that the *Nung cheng ts'üan shu*, reviewed above, has a much higher value in this regard, but the *Shou shi t'ung k'ao* is important as a vast mine of quotations. The engravings relating to plants are very rude.

A synopsis of the work has been given by Baron (now Marquis) L. d'Hervey de St. Denys in his *Recherches sur l'Agriculture et l'Horticulture des Chinois*. It is divided into eight sections comprising 78 books.

³¹ The article on Insect wax, and the trees upon which the insects feed, was translated by Stan. Julien. See: *Industries de l'Empire Chinois* par Stan. Julien et P. Champion, p. 109.

I. On the Seasons. Books 1—6.

II. On the Nature of the Soil, Division of Land, Irrigation. Books 7—15. In the eighth book we find geographical maps of the 18 provinces of the Empire.

III. On the Cultivation of Cereals. Books 19—30.

Rice, *Panicum italicum*, *Panicum miliaceum*, Sorgho, Maize, Wheat, Barley, Rye (from Russia), Buckwheat, Oat.—Soja bean, *Phaseolus radiatus*, *Pisum sativum*, *Vicia Faba*, *Dolichos sinensis*, *Labiab vulgaris* and other leguminous plants.—Hemp, *Agriophyllum gobicum*, *Ricinus communis*, *Echinochloa crus galli*, Eleusine Coracana, Coix Lachryma.

IV. On Agricultural Implements, with numerous illustrations. Books 31—41.

V. Imperial Edicts regarding Husbandry. On the Sacrifices offered to the Spirit of the soil. On the Ceremony of Ploughing the soil. Books 42—51.—Drawings illustrating the Processes of Husbandry, Sericulture, etc. Books 52—53.

VI. Preservation of Grains. Granaries. Books 54—57.

VII. Additional matter on Agriculture. After some remarks on Fences and on Grafting trees (58) short accounts of cultivated plants are given, accompanied with drawings.

Vegetables (59—62): Turnip, *Chrysanthemum coronarium*, various species of *Artemisia*, *Brassica chinensis*, *Sinapis*, Spinach, *Amarantus Blitum*, *Portulacca oleracea*, *Basella rubra*, *Malva verticillata*, *Sonchus arvensis*, *Ipomoea reptans*, *Brassica chinensis oleifera*, Edible Ferns (*Pteris aquilina*), *Chenopodium album*, *Capsella Bursa pastoris*, *Dioscorea sativa*, *Colocasia esculenta*, *Stachys affinis*, *Batatas edulis*, *Raphanus sativus*, *Daucus Carota*, *Lactuca sativa*, *Limnanthemum*, Celery, *Arundo phragmites*, various Pumpkins, Melon pumpkin, *Benincasa cerifera*, Cucumber, *Luffa ægyptiaca*, *Lagenaria*, *Solanum melongena*, Mushrooms, Ginger, various species of *Zanthoxylum*, *Capsicum annum*, Fennel, Star Anise, *Allium odorum*, *Allium fistulosum*, *Allium sativum*, and other species. *Coriandrum sativum*. *Medicago sativa*.

Fruits (63—66): Plum, Apricot, Peach, Pear, Apple, *Prunus pseudocerasus*, *Myrica sapida*, *Eriobotrya japonica*. Crab-apple, *Cratægus pinnatifida*, *Hovenia dulcis*, *Vitis vinifera*, Jujube, *Diospyros Kaki*, *Diospyros Lotus*, *Cydonia sinensis*. *Punica granatum*, Chestnut, *Torreya nucifera*. Hazelnut, seeds of *Pinus coraënsis*, Walnut, *Salisburia adiantifolia*, *Nephelium Litchi* and Longan, various Oranges, *Citrus japonica*, *Citrus decumana*, *Canarium album* and *Pinela*, Cocoa-nut, *Ficus Carica*, *Xanthoceras sorbifolia*.

Melon, Water-melon, *Nelumbium speciosum*, Sugar-cane, Water-caltrop, *Euryale ferox*, *Eleocharis tuberosa*, *Sagittaria*.

Trees (67—68): *Pinus sinensis*, *Thuja orientalis*, *Juniperus chinensis*, *Catalpa*, *Cunninghamia sinensis*, *Cedrela sinensis*, *Sterculia platanifolia*, *Broussonetia papyrifera*, *Sophora japonica*, *Ulmus pumila*, *Salix babylonica*, *Tamarix chinensis*, *Populus*, Wax-insect trees and Insect-wax,³² *Stillingia sebifera*, Varnish-tree, *Chamærops Fortunei*, *Gleditschia sinensis*, *Gardenia florida*, *Lycium chinense*, *Aralia*.

³² Translated by Stan. Julien. See: *Industries de l'Empire Chinois* l. c. p. 106.

Various cultivations (63): Bamboo, Tea-plant, Safflower, Indigo plants, *Lithospermum erythrorhizon*, *Rehmannia glutinosa*, *Typha*, Matting grass, *Juncus effusus*.

Domestic Animals. Books 70—71.

VIII. On Rearing Silkworms and Planting Mulberry-trees.³³
Books 72—76.

Additional section on Textile plants. Books 77—78.

Cotton, Hemp, *Boehmeria nivea*, *Sida tiliæfolia*, *Pueraria Thunbergiana*,³⁴ *Musa*.

3. CHINESE GEOGRAPHICAL WORKS CONTAINING BOTANICAL INFORMATION.

A vast part of native literature is devoted to the Geography of China proper and the adjacent countries. The Chinese are accustomed to give in their topographical works more or less detailed accounts of the Natural productions. Thus in the 禹貢 *Yü kung*, already mentioned (see above *Shu king*), the earliest description of China extant, the productions of the soil are enumerated for each of the nine provinces of the Empire.

The next General Description of China, which has been handed down to us, is the 太平寰宇記 *T'ai p'ing Huan yü ki*, in 193 books, by 樂史 *Lo Shi*, published during the period T'ai p'ing, A. D. 976—983. The natural productions are given for each prefecture.³⁵

The 元一統志 *Yüan I t'ung chi*, or Great Geography of the Yüan or Mongol dynasty, seems to have survived only in some

³³ These five books were translated by Stan. Julien. *Sur la Culture des Muriers et l'Education des Vers à soie*. 1837.

³⁴ The articles on the cultivation of *Boehmeria nivea* and *Pueraria Thunbergiana* were translated by Stan. Julien. See: *Industries de l'Empire Chinois* l. c. 162, and *Comptes rendus de l'Académie des sciences* XVII, 1843. p. 421.

³⁵ In 1842 Prof. W. Schott, Berlin, published in the "Abhandlungen der Kgl. Akademie der Wissenschaften," p. 245—385 a paper: *Skizze zu einer Topographie der Producte des Chinesischen Reiches*. After some bibliographical notices of the *Pen ts'ao kang mu* and other native works on Natural History, the author enumerates the **Natural Products of China** according to their geographical distribution. His information was drawn from the *T'ai p'ing Huang yü ki* and another descriptive account of China, the *Kuang yü ki*, which we have mentioned on a previous page.

quotations drawn from it, and preserved in the writings of authors of the Ming; but the General Description of China referring to this latter dynasty is still extant and is not a rare book. It was published by 李賢 Li Hien, with the assistance of others, in 90 books, with numerous maps, in 1461, under the title 大明一統志 *Ta Ming I t'ung chi*.

The Great Geography of the Empire of the present dynasty, the 大清一統志 *Ta Ts'ing I t'ung chi*, was compiled by Imperial command, and the first edition of it was published about the middle of last century. In this well known work, in 500 books, the matter is arranged on the same plan as that adopted for previous works of this class. The different provinces are taken up *seriatim*, and the descriptive accounts, given systematically for each prefecture, conclude with an enumeration of the natural productions.

Besides this there exist many detailed descriptions of single provinces of China, and special works treat even of the greater part of the prefectures and districts. One or more books in these topographies are always devoted to an account of the natural productions, 土產 *t'u ch'an* or 物產 *wu ch'an*. In some cases these are specified in great detail, accompanied by interesting remarks derived from local observers. I subjoin in the sequel a list of those native topographical works, or 志 *chi*, of the present dynasty, which I have had an opportunity of consulting, and which are frequently quoted in native botanical treatises. They have been published, for the most part, by Imperial authority, and the majority of them are based upon previous compilations, bearing sometimes the same titles. Some of these original accounts of the topography of the provinces, prefectures, or districts of the Empire can be traced back to a period as early as the 11th or 12th century. A great number of them were published for the first time during the Ming period.

The 畿輔通志 *Ki fu t'ung chi*, or Topography of the Province of Chihli, published in 1729, in 120 books. But a description of this province was drawn up much earlier, in 1672. The natural productions are enumerated in books 56 and 57.

The 天津縣志 *T'ien tsin hien chi*, in 24 books, 1739. District of T'ien tsin in the province of Chihli.—Natural productions, book 13.

The 宣化縣志 *Süan hua hien chi*, in 30 books, 1711. District of Süan hua in Northern Chihli. Natural productions, book 14. Interesting accounts of plants.

The 承德府志 *Ch'eng te fu chi*, in 60 books, 1831. The prefecture of Ch'eng te fu in Northern Chihli, beyond the Great Wall, is known also under the name of 熱河 *Je ho* (hot river), where one of the summer palaces of the Emperor is situated (Je hol in European works). This compilation is partly based upon the 熱河志 *Je ho chi*, in 80 books, published in 1781. It contains very interesting details relating to plants and animals of Mongolia, in books 28, 29.

The 盛京通志 *Sheng king t'ung chi*. This is properly a Topography of Sheng king or Southern Manchuria, but it contains also accounts of the Northern part of Chinese Manchuria (Girin, Tsitsihar, etc.). The original edition of this work is in 32 books; the second, 1736, in 48 books. The last edition, much enlarged, issued in 1779, comprises 120 books. The natural productions of Manchuria are detailed in several books. Book 106 is devoted to plants, cultivated as well as wild, and gives many interesting particulars with respect to the Flora of these little-known tracts. Manchurian names of plants are occasionally given together with the Chinese appellations.

The 山西通志 *Shan si t'ung chi*, 1734, in 230 books, a Topography of the province of Shansi. Natural productions, book 47. There is a description of the same province, the 山西志 *Shan si chi*, in 16 books, published in 1474. See Sz' k'u ts'üan shu LXXIII, 1.

The 山東通志 *Shan tung t'ung chi*, or Topography of the province of Shantung. The first edition was published about the middle of the 16th century and is still extant. Sz' k'u ts'üan shu

LXXIII, 17. The last edition, 1736, in 36 books. Natural productions, book 24.

The 陝西通志 *Shen si t'ung chi*, or Topography of the province of Shensi. First edition during the reign of Kang hi. Another edition, 1735, in 100 books. Natural productions in books 43, 44.

There is a similar work, entitled 陝西志 *Shen si chi*, in 30 books, published in 1517. See Sz' k'u ts'üan shu LXXIII, 4.

The 甘肅通志 *Kan su t'ung chi*, or Topography of the province of Kansu, in 50 books, 1736. Natural productions, book 12.

The 河南通志 *Ho nan t'ung chi*, or Topography of the province of Honan. A work of this name existed in the Ming period (Kia tsing). During the present dynasty one edition of the Ho nan t'ung chi was published at the end of the 17th century. Last edition 1744, in 80 books. Natural productions in book 29.

The 江南通志 *Kiang nan t'ung chi*. Kiang nan is the old general name for the present provinces of *An hui* and *Kiang su*. The work was published in 200 books, in 1736. Natural productions in book 86.

The 安徽通志 *An hui t'ung chi*, or Topography of the province of Anhui, in 260 books, 1830. Natural productions in book 64.

The 蘇州府志 *Su chou fu chi*, or Topography of the prefecture of Su chou in Kiang su. Two works of this name were published during the Ming, and several editions of it appeared during the present dynasty. See Wylie's Notes on Chin. Lit. 37. The last edition of 1824 is in 150 books. Natural productions in book 18.

The 湖廣通志 *Hu kuang t'ung chi*. The two provinces of Hu pei and Hu nan are known under the general name of Hu kuang. During the reign of Ming Wan li (end of 16th century) a description of these regions appeared with the title 湖廣總志

Hu kuang tsung chi, in 98 books. See Sz' k'u ts'üan shu LXXIV, 10. The first edition of the *Hu kuang t'ung chi* was published in 1684. The last edition, 1733, is in 120 books.

The 湖北通志 *Hu pei t'ung chi*, or Topography of the province of Hu pei, in 100 books, 1757. Natural productions in book 23.

The 湖南通志 *Hu nan t'ung chi*, Topography of the province of Hu nan, in 174 books, 1757. Natural productions in book 50.

The 江西通志 *Kiang si t'ung chi*, Topography of the province of Kiang si, in 162 books, 1729. Natural productions in book 27.

There is a work of the same name in 37 books, published during the Ming, Kia tsing period. See Sz' k'u ts'üan shu LXXIII, 8.

The 浙江通志 *Che kiang t'ung chi*, Topography of the province of Che kiang. The original work, in 72 books, dates from the time of the Ming, first half of the 16th century. Several editions have been issued during the present dynasty, one in 1684, in 50 books, natural productions in book 17; another one, much enlarged, in 120 books, was published in 1736. Natural productions in books 101—107.

The 福建通志 *Fu kien t'ung chi*, Topography of the province of Fu kien, in 78 books, 1737. Natural productions in books 10—11. A supplement to the work was published, in 92 books, in 1768, with the title 福建續通志 *Fu kien sü t'ung chi*. Natural productions in books 9—10.

A similar description of the province of Fu kien was published in 87 books with the title of 八閩通志 *Pa Min t'ung chi*, towards the end of the 15th century. Sz' k'u ts'üan shu LXXIII, 4.

The 臺灣府志 *T'ai wan fu chi*, a Topography of the portion of the island of Formosa belonging to the Chinese Empire. First

edition 1694, a second 1741, a third 1747, in 25 books. See Wylie l.c.38. In "Notes and Queries on China and Japan," 1868, p. 134, is a paper: Notes on the Vegetable kingdom of Formosa from the T'ai wan fu chi.

The 廣東通志 *Kuang tung t'ung chi*, or Topography of the province of Kuang tung. A work of this name was first published during the Ming reign of Kia tsing, in 40 books; and another during the reign of Wan li, in 72 books. See Sz' k'u ts'üan shu LXXIV, 2, 12. During the present dynasty the first edition of the Kuang tung t'ung chi appeared in 1693; another edition, in 64 books, in 1731. A thoroughly revised edition was issued in 1822, in 334 books. Natural productions in books 94—99. There is a new revised edition published in 1864.

The 廣西通志 *Kuang si t'ung chi*, or Topography of the province of Kuang si. A work of this name, according to the Sz' k'u ts'üan shu LXXIII, 16, first appeared during the reign of Ming Kia tsing, in 60 books. In 1733 the Kuang si t'ung chi was published in 128 books. In 1801 a new revised edition was published in 279 books. Natural productions in books 89—93.

The 貴州通志 *Kui chou t'ung chi*, or Topography of the province of Kui chou. A work of this name was first published in 12 books, in 1541. See Sz' k'u ts'üan shu LXXIV, 7. The Kui chou t'ung chi of the present dynasty appeared in 1741, in 46 books. Natural productions in book 15.

The 四川通志 *Sz' ch'uan t'ung chi*, or Topography of the province of Sz' ch'uan. First edition, in 47 books, 1729. A new edition, in 200 books, 1816. Natural productions in books 74, 75.

There is a work, 四川總志 *Sz' ch'uan tsung chi*, in 34 books, published during the Ming, Wan li period. Sz' k'u ts'üan shu LXXIV, 13.

The 雲南通志 *Yün nan t'ung chi*, or Topography of the province of Yün nan. A work of this name, in 18 books, is mentioned in the bibliographical section of the Ming history.

There are also noticed several other descriptions of Yün nan. The Yün nan t'ung chi of the present dynasty appeared first in 1691, in 17 books. Another improved edition was issued in 30 books, in 1729.

Another descriptive account of the province of Yün nan was published in 1808, with the title 滇繫 *Tien hi* (Tien being an old name of that province). 40 books. Natural productions in book 5.

The 琉球國志略 *Liu kiu kuo chi lio*, in 16 books, published in 1757. This is a topographical account, etc. of the Liu kiu (Lew chew) islands. Natural productions in book 14. Very interesting is the chapter on the plants of the islands.

I may finally mention here the 南越筆記 *Nan yüe pi ki*, by 李調元 *Li Tiao yüan*, a native of Mien chou (Sz' ch'uan), of the present dynasty. It is a descriptive account of remarkable objects in the province of Kuang tung, in 16 books, containing interesting notes on Southern Chinese plants.

This record is found reproduced in the 函海 *Han hai* collection of reprints, 1783.

4. EARLY ACQUAINTANCE OF THE CHINESE WITH INDIAN AND WESTERN ASIATIC PLANTS.

After Buddhism was introduced into China, A. D. 68, a frequent intercourse between this country and India commenced and did not cease for many centuries. Chinese Buddhist priests visited the land of Buddha, and Hindoo priests were invited by the Chinese Emperors to translate the Sacred writings from Sanscrit. Sanscrit names of Indian natural objects are frequently met in Buddhist works. These names appear in the Chinese translations rendered by Chinese characters, imitating the foreign sounds. Early attempts have also been made by the Chinese to explain the Sanscrit names of plants, animals, minerals and other objects, and to identify them with the corresponding Chinese terms. Although

it does not seem that the Indian or Persian systems of medicine have ever influenced Chinese views on the art of healing or modified the sacred rules established in this respect by their primeval Emperors, it can nevertheless be concluded from some early Chinese works on Indian or Western medicines, the titles of which have been preserved, that the Chinese took an interest in the subject. In the History of the *Sui* dynasty (589—618), book 34, Section on Literature, the following titles of collections of foreign medical prescriptions are mentioned:

The 婆羅門藥方 *Po lo men Yao fang*, in 5 books. Medical Prescriptions of the Brahmans (Hindoos).

The 婆羅門諸仙藥方 *Po lo men Chu sien yao fang*, in 20 books. Medical Prescriptions of the Immortals of the Hindoos.

The 乾陀利治鬼方 *Kan t'o li Chi kui fang*, in 10 books. Medical Prescriptions for curing those possessed by demons; used in Kan t'o li.³⁶

The 西域名醫所集要方 *Si yü Ming i su tsi yao fang*, in 4 books. Medical Prescriptions of celebrated physicians in the Countries of the West.

The 西域諸仙所說藥方 *Si yü Chu sien su shuo yao fang*, in 23 books.

The 出胡國方 *Ch'u Hu kuo fang*. Prescriptions from the Hu kingdoms, in 10 books, by 摩訶 *Mo ho*, who was a 胡沙門 *Hu sha men*, or priest of the Hu.³⁷

The Pen ts'ao kang mu notices a 胡本草 *Hu Pen ts'ao*, or Materia medica of the Hu. See above History of Materia medica No. 14.

Stan. Julien (*Mél. de Géographie asiat.* p. 144) mentions a Chinese work 翻外國語 *Fan nai kuo yü*, of the 6th century, which he believes to be a translation of the well-known Sanscrit vocabulary *Amara Cosha* (first century B. C.).

During the T'ang dynasty (618—907) the Chinese took a great interest in the kingdoms of India, which they then reached by land as well as by sea. They became acquainted with many vegetable productions of those countries as well as of

³⁶ According to the History of the Liang dynasty (502—557) Kan t'o li was an island in the Southern Sea, somewhere near Annam it seems.

³⁷ By *Hu* the Chinese generally understand Western Asia, sometimes also India.

the Indian Archipelago, much valued in China up to the present day. Thus in the Chinese works of that period on Geography and Natural History we often meet with Indian names of plants. Under the Sung dynasty (10—12th century) regular Sanscrit schools with Hindoo priests teaching the language were established in China. A Glossary of Sanscrit proper names occurring in the sacred writings, published during that period, has come down to us. It bears the title 翻譯名義 *Fan i ming i* and was written by a priest named 法雲 *Fa yün*, in 1143, in 20 books, one of which is devoted to minerals, animals and plants. 75 Sanscrit names of plants are given there, rendered by Chinese sounds, and explained and identified, as far as possible, with the respective Chinese equivalents. About one-half of these names of plants may be found in Dr. Eitel's Handbook of Buddhism (1871), with the scientific botanical names added.³⁸

The term 梵書 *fan shu* (fan books), frequently met in the *Pen ts'ao kang mu*, in connection with Sanscrit names of natural objects, apparently denotes Sanscrit writings in general. *Fan* or properly 梵摩 *fan mo* means Brahma.

From the 6th century the Chinese maintained frequent intercourse not only with India, but also with Persia, and during

³⁸ It may not be out of place to say here a few words on the attempts made by European Sanscrit scholars and botanists to ascertain the botanical names of plants noticed in the ancient Sanscrit Vocabulary, *Amara Cosha*, and other writings in the classical language of the Hindoos, which was a dead language, not spoken even at the time of Buddha. The results of these investigations have been brought together in J. F. Watson's *Index to the native and scientific Names of India and other Eastern Plants*, 1868, and also in E. Balfour's *Cyclopaedia of India*, the second edition of which appeared 1871—1873. The latter is a comprehensive work in five bulky volumes, generally compiled from good sources, but without much critical judgment and without thorough acquaintance with the immense and varied matter embraced in the *Cyclopaedia of India*. Thus the author does not hesitate to admit the existence of Sanscrit names for such plants as *Agave americana*, *Anacardium occidentale*, *Anona squamosa* and *reticulata*, *Helianthus annuus*, *Mirabilis Jalapa*, *Nicotiana Tabacum*, *Zea Mays* and other plants, which, as is well known, have been introduced into Asia from America, since the discovery of the New World. This fact induces me to doubt whether the identifications of ancient Sanscrit names of plants, as given in the above-mentioned works and Sanscrit dictionaries, are at all reliable. With respect to the author of the above-mentioned *Amara Cosha*, Mr. Balfour states that he was one of the nine poets at the court of Viçramaditya, and that he is supposed to have lived about A. D. 948. But under Viçramaditya we read that he reigned B. C. 56. Such contradictory statements on the same subject under different heads are not uncommon in the *Cyclopaedia*.

the T'ang dynasty, in the 8th and 9th centuries, with the Empire of the Kalifs, it seems by sea as well as by the overland route. In Chinese works of that period we find not infrequent accounts of remarkable natural productions of Western Asia. I may only notice here the 酉陽雜俎 *Yu yang tsa tsu*, in 20 books, written by 段成式 *Tuan Ch'eng shi*, towards the end of the 8th century (Wylie l. c. 155). According to Mayers (*Chin. Read. Man.* p. 211) the author died in 863. The *Yu yang tsa tsu* contains much information regarding the productions of China and of foreign countries, especially India and Persia.

There is a Chinese Vocabulary of Foreign Languages, published by the 四夷館 *Sz' i kuan*, or Department of Interpreters,³⁹ apparently in the 15th century, in which amongst other terms are given also the names of the most common plants in *Chinese* and in *Persian Uigur, Siamese, Tibetan, Burmese* and two other languages of some tribes at the Southern border of China. The words are all written in the original letters of the respective nations, and their pronunciation is indicated by Chinese characters. These vocabularies form an interesting contribution towards our knowledge of Asiatic names of plants. The Uigur names present a peculiar interest, as very little is known of this language. I may here mention that Mr. Scully has lately published two *Turki Vocabularies of Birds and Plants* in Mr. R. B. Shaw's *Vocabulary of the Language of Eastern Turkistan*.

Let me notice finally the 西域圖志 *Si yü t'u chi*, a Description of Eastern Turkistan and the Chinese dependencies in the West, illustrated by a series of maps. It was published in 1756, in 52 books. In book 43 some details with respect to the natural productions of these regions are given. We find there the native (Turki) names (rendered by Chinese sounds) of more than fifty common plants, with the Chinese equivalents.

³⁹ See Klaproth's *Verzeichniss der Chines. und Mandsh. Bücher der Bibliothek in Berlin*, 1822.

5. HISTORY OF MATERIA MEDICA AND BOTANY IN JAPAN.

The greater part of the information contained in this record has been derived from a very able unpublished paper, drawn up at my request from reliable native sources by Dr. Geerts, a well-known scholar residing in that country, who with rare liberality has placed at my disposal the results of his researches into the history of Medicine and Botany in Japan.

The early civilisation of Japan, as well as that of Corea and Annam, was based almost entirely upon Chinese principles of culture, freely adopted by the barbarian neighbours of the mighty Chinese Empire. Annamese speech is obviously only a dialect of Chinese. It is known that the Japanese have two modes of writing, the alphabet of 48 characters, *iroha*, used in the simple style of writing, and the ideographical *Chinese characters* employed in public documents and scientific writings. The *iroha*, now considered to be the modification of certain familiar Chinese characters, is said to have been introduced into Japan from Corea in the second and first centuries B. C. Previous to that time the Japanese possessed no written language of their own.

The introduction of the Chinese written language into Japan is recorded in Japanese annals to have taken place in the 3rd century of our era. During the reign of the Japanese Empress *Jingo tenno*, who invaded Corea at the end of the 2nd century, Chinese books were first brought thence to Japan. About A. D. 285 *Atogi* (阿屠岐), a son of the King of Corea, came on an embassy to the court of Japan, where he remained one year. He brought also some Chinese books, and at his instigation *Wani* (王仁), a distinguished Chinese scholar, was invited from Corea to Japan to teach Chinese. He arrived in 286 and was appointed Instructor of the Imperial Princes. To him the introduction of Chinese characters into Japan is attributed. He is said to have been a native of the Chinese Kingdom of *Go* (吳 *Wu*), the Eastern of the three states into which China was divided after the Han dynasty, and a descendant of the Emperors of that house. He lived in *Fakusai* (百濟 *Po tsi*), in South-eastern Corea.—From this time the Chinese Classics and Literature of all branches

gradually became the study of all higher classes in Japan, the nobles, military officers, priests and physicians. Thus from China was derived the knowledge of Agriculture, Manufactures, the Arts, Religion, Philosophy, Ethics, Medicine, etc.

As to the art of healing some native system of curing diseases existed no doubt in Japan in ancient times. *Oanamuchi-no-Mikoto* and *Sukuna Hikona no Mikoto*, two famous Japanese physicians, are both worshipped as medical divinities and as founders of the art of healing. But at an early period the Chinese principles of medicine were entirely adopted in Japan and have maintained themselves in that country up to the present time.

Japanese annals record that A. D. 420 a Chinese physician, by name 金波鎮漢紀武 (in Chinese *Kin po chen han ki nu*), was invited by the Japanese Emperor from Corea to Japan. He came from the Corean kingdom *Shin ro* (新羅 *Sin lo*).

In 554 *Tei yu da* (丁有陀) and *Han riyo* (潘量), two apothecaries, natives of the Corean kingdom of Kudara, arrived in Japan to teach Chinese medicine there. Six other Coreans are recorded to have been invited for the same purposes. The Chinese works on *Materia medica* known then in Japan were the 神農本草經 and the 名醫別錄 (see above Hist. Mat. med. No. 1 and 7).

In 686 court physicians were for the first time appointed in Japan, and in 702 a great University for the promotion of Medicine, Astrology and other Chinese sciences was established at *Dai sai*, the seat of the Central government at that time. This place was situated in the Northern part of the island of Kiu shiu.

About the year 850 this University at *Dai sai* was improved. The different branches of medical science were taught separately, viz.: Internal diseases, External diseases, Surgical operations, Infantile complaints, Diseases of the eyes, the ears, the mouth, teeth, etc., Acupuncture.

From the year 717 a Botanical Garden was connected with the University, in which medicinal plants were cultivated. From the year 787 *Materia medica* was taught according to the Chinese treatises 新修本草 (new revised *Pen ts'ao*) and the 唐本草 (see above Hist. Mat. med. No. 11).

In 794 *Kiyoto* became the capital of Japan, and the Emperor Kan mu tenno established there a University for the promotion of Chinese sciences. At about the same time libraries were first founded in Japan.

In 808 *Hirosada*, a Japanese physician, a native of the province of Idzumo, published in Japanese a Chinese work on Materia medica, entitled 大同類聚方.⁴⁰ It was republished in 1827.

From the second half of the 11th century a considerable trade in drugs was carried on between Japan and China.

In the second half of the 15th century the leading works on Materia medica studied in Japan were the Chinese treatises 諸家本草 and the 開寶本草 (see above Hist. Mat. med. No. 21, 22).

History has preserved the names of three Japanese physicians of the 15th and 16th centuries famed for their knowledge of drugs, viz.: *Takeda Sadamori* (1467), *Osada Tokuhon* (1500), and *Yoshida Soke* (1550).

The Chinese 本草綱目 *Pen ts'ao kang mu*, published as we have seen at the close of the 16th century, was known in Japan soon after its appearance. It was translated into Japanese with the Japanese title *Hon zo ko mo ku*, in 1714, by Ina Nobuyoski (Ina Wakasui).

The 救荒本草 *Kiu huang pen ts'ao* (l. c. No. 35) was translated two years later.

The historical facts recorded in the above sketch of the development of botanical knowledge in Japan leave no doubt that the Materia medica of the Japanese was originally entirely based upon Chinese works, which have been reprinted and commented upon in Japan, especially since the 9th century. It is further known that from the 7th and 8th centuries learned Chinese and Korean physicians and Buddhist priests frequently came to Japan; whilst on the other hand Japanese physicians used to visit China with the purpose of studying medicinal plants. They thus had an opportunity of comparing Chinese and Japanese plants, and were enabled to identify the species found in both countries. Thus we find in Japanese works on Botany, besides the popular

⁴⁰ Chinese catalogues do not mention this treatise.

Japanese appellations of plants, in many instances also Chinese names written in Chinese characters. It seems that most of these identifications can be traced back to the period of the Chinese 唐 T'ang dynasty, for the character T'ang (*Kara* in Japanese), frequently found in Japanese names of plants, is always used there to designate the Chinese origin of a plant. But some Chinese names applied now-a-days to Japanese plants occur for the first time in the Kiu huang pen ts'ao, and this proves that Japanese botanists subsequent to the time of publication of this work (beginning of the 15th century) continued to determine the plants of their country from Chinese botanical works. It can be said that these identifications of Chinese and Japanese plants made by Japanese botanists at different times are correct upon the whole, at least as far as the genus is concerned. Sometimes the same Chinese name is applied in China and in Japan to different species of the same genus, seldom to plants having no resemblance to each other. The tree 樗 *ch'u* in Chinese books is *Ailantus glandulosa*; but in Japan where the tree is not found the above Chinese character is applied to *Euscaphis staphyleoides*. Sieb. et Zucc. fl. Japon. I, 124. We learn from Siebold that the inner bark of the root of this Japanese shrub is largely used in the country as an efficacious remedy in dysentery, just as the inner bark of the root of *Ailantus* is used by the Chinese.—馬先蒿 *Ma sien hao* in China is *Incarvillea sinensis*, not observed in Japan, where the above Chinese name designates *Pedicularis resupinata*.

The Chinese names of plants given in Japanese botanical works together with the popular Japanese names act there the part of our scientific botanical names.

It was in 1709 that the first original Japanese work on *Materia medica* was published by *Kaibara Rakuken*, with the title 大和本草 *Yamato Honzo*, in 18 books.

A small treatise on Japanese Botany was published about the middle of the last century, with the title 花彙 *Kwa wi*, by the Japanese botanist *Yo nan shi*, assisted by his pupil *Ono Ranzan*. The *Kwa wi* comprises eight books, in which 200 plants are described. The drawings accompanying the text are not of a high

order. This treatise was translated into French by Dr. L. Savatier in 1873.

Ono Ranzan, the collaborator of *Yo nan shi*, subsequently became a celebrated botanist,—not only from a Japanese point of view. In his writings we first observe the influence of European science upon Japanese views on botany. The Dutch, after the expulsion of Europeans in 1639, were during more than two centuries the only European nation allowed to carry on trade with Japan; but they were not allowed to see more of Japan than the little island of Decima (Nagasaki). Notwithstanding this restriction they succeeded in awakening among the Japanese an interest in European science, especially natural history; and since the middle of the last century we find in Japan many native botanists who have studied botany from European books.

Ono Ranzan, whom Siebold styles the Linnæus of Japan, wrote an important commentary on the *Pen ts'ao kang mu*, with the title 本草綱目啓蒙 *Hon zo ho moku kei mo*, in 35 books, in which he displays a considerable critical judgment. He proves also that the majority of the natural productions of China are likewise found in Japan. This work was published in 1804, after the death of the author, by his grandson, who in 1847 issued another revised and enlarged edition.

Further particulars with respect to Japanese botanists and their scientific productions may be found in the introductory part of Dr. A. I. C. Geerts' "Produits de la nature japonaise et chinoise," 1878. I shall confine myself to saying a few words on some more recent Japanese botanical works, which I myself possess and from which I have derived great assistance in determining plants described and depicted in Chinese botanical works.

The 本草圖譜 *Hon zo dzu fu*, published in 1828, in 96 books, by Iwasaki Tsunemasa of Yeddo, describes 1795 plants and gives as many coloured drawings. It is now very difficult to obtain a complete printed copy of the work, the greater part of the edition having probably been destroyed by fire. I possess only the first ten books of it, but have had an opportunity of consulting a complete copy in the Library of the Imperial Academy at St. Petersburg. The arrangement followed in it is that of the *Pen ts'ao kang mu*.

Another Japanese general work on Botany of much higher claim than the above-mentioned, was published in 1856, with the title 草木圖說 *So moku dzu setsu*, by Inuma Chojun, a pupil of Dr. Siebold. But only 20 books of this Japanese Flora japonica have been issued. They comprise the first section, Herbaceous plants (with the exception of Grasses), wild and cultivated, arranged according to the system of Linnæus, and accompanied with 1215 admirably executed drawings, made from nature and answering perfectly all scientific purposes. It has full claim to the accuracy of a scientific work. Besides the Japanese name for each plant, the Chinese names are also given, if such exist, and in many cases we find also the Linnean or popular Dutch names added. This work is frequently quoted in Maximowicz's numerous publications on the Flora of Japan. He quotes it (after Miquel) with the incorrect title *Soo bohj*. I have heard that in 1875 a new enlarged edition of the *So moku dzu setsu* has been published by Tanaka. Dr. Savatier has attempted, with the assistance of Franchet, to determine the plants not only of the *So moku dzu setsu*, but also as far as possible those represented on the plates of the *Hon zo dzu fu*. See their "Enumeratio Plantarum in Japonia sponte crescentium," 1876.

I possess also a short but very valuable Japanese treatise on Poisonous plants, the 有毒草木圖說 *Yu doku so moku dzu setsu*, illustrated by fine wood-cuts, in two books, with 123 plates. This was published in 1827 by the Japanese Horticultural Society of the province of Owari.

6. ON THE BOTANICAL KNOWLEDGE OF COREANS, MANCHOOS, MONGOLS, AND TIBETANS.

Tributary to China for ages, Corea at an early period universally adopted the Chinese form of civilisation, and it was in Corea that the Japanese first became acquainted with the Chinese language, mode of writing, and literature. Although the Coreans, like the Japanese, possess their own alphabet, there is no national literature in their country, all literary works composed by Coreans

having been written in Chinese. One of the best Chinese works on Medicine is of Korean origin. The 東醫寶鑑 *Tung i pao kien*, or Precious Mirror of Eastern Medicine, written during the Ming, at the end of the 16th or beginning of the 17th century, by 許浚 *Hü Pa*, a native of 陽平 *Yang p'ing* in South-western Corea, embraces the whole compass of medicine, as well as Materia medica. It comprises 28 large books and has been several times republished in China. Although it claims in some respects to be original, this originality refers more to the arrangement of the matter, and as can be concluded from the quotations, it was compiled from Chinese authors. It does not seem that Korean Medicine and Materia medica differ from Chinese works on the subject. As in the Korean language a large portion of Chinese words and phrases, even for common expressions, have been borrowed from the Chinese, we need not be surprised to find that many plants grown in Corea are known to the natives only by their Chinese names. Korean names for the most common plants in that country may be found in Dr. Siebold's 類合 *Lui ho*, or *Vocabularium sinense in koraianum conversum*, opus sinicum origine in peninsula Korai impressum, 1838; and also in Putzillo's Russian-Corean Dictionary (in Russian), 1874.

Lately a more complete Korean dictionary has been published with the title: Dictionnaire Coréen-Français, par les Missionnaires de Corée. Yokohama, 1880.

There is also no original Manchoo system of Medicine or Materia medica extant. As is known, Manchoo literature dates only from the end of the 17th century and consists of translations from Chinese works, such as Dictionaries, the Classics, Histories of China, novels, etc. As far as I know the only Manchoo work on Medicine is a treatise on Anatomy, translated from a European work by the Jesuit Father Parennin, in 1723. My colleague and friend, Dr. Dudgeon, possesses a manuscript copy of this translation, illustrated by beautifully executed drawings. (See his "Report of the Peking Hospital for 1878 and 1879," p. 46.) A manuscript copy of the same, but without drawings, is likewise found in the Library of the Russian Legation at Peking.

An interesting list of Manchoo names of plants and drugs, with the equivalent Chinese names added, is found in the great Comparative Dictionary in Chinese and three other Eastern Asiatic languages, of which we shall speak further on. The Manchoo names referring to Chinese plants not found in Manchuria are frequently forged.

The system of medicine adopted by the Mongol physicians in Mongolia seems to be based on Tibetan principles of the art of healing. The majority of medicines used in Mongolia are compounded of Tibetan drugs.⁴¹ Very little on the subject has hitherto come under the notice of investigators into Eastern Asiatic medicine. There are several Tibetan treatises on the art of healing and *Materia medica*. Cosma de Köros has given the *Analysis of a Tibetan medical work* in the Journal of the Asiatic Society of Bengal, IV, p. 1, but he does not say much regarding Tibetan medicines. I had once an opportunity of seeing in Peking a kind of *Tibetan Natural history*, with rude drawings, in which the Tibetan names of natural objects were accompanied with the corresponding Chinese names. The book was styled 本草 *Pen t'ao* in Chinese.

Dr. J. Rehmann, a Russian physician,⁴² procured in 1805 in Maimaicheng (on the frontier of Mongolia, opposite Kiakhta) 60 Tibetan (or Chinese) drugs used by the Mongol physicians. He examined these specimens with the assistance of the botanist Redowsky and described them (in German) in a small pamphlet entitled: *Beschreibung einer Tibetanischen Hand-Apotheke*. St. Petersburg, 1811. Rehmann gives also the Tibetan names of each drug in Tibetan letters and the pronunciation in German.

41 There is in the city of *Urga*, in Northern Mongolia, an old Tibetan Lama priest, *Cho in den* famed for his skill in curing diseases. His reputation has even spread over Siberia, and Russians from Kiakhta or Irkutsk are not unfrequently seen in *Urga* submitting to the medical treatment of the old Mongolian Aesculapius, whose medicines are all derived from Tibet. It seems to me that in the majority of cases his success must be attributed to the healthy mountain air of *Urga*.

42 Dr. Rehmann accompanied in 1805 the Russian Embassy under Count Golovkin to China. To the same Embassy were attached Redowsky, Adams, and Helm, as naturalists; the celebrated Klaproth as orientalist. As is known Golovkin was obliged to return from *Urga* to Russia.

As to the drugs derived from the vegetable kingdom, he was of course only in a few cases able to determine the botanical origin of these medicines.

A more complete collection of drugs used in Mongol or Tibetan medicine can be found in Peking in the shop of 萬億號 *Wan I hao*, a rich Chinese firm, well known among the Mongols, Tanguts and Tibetans, as it carries on a great commercial intercourse with these nations and supplies the wants of the merchants and Lama priests who are accustomed to repair to Peking in winter. This shop is situated between the British and Russian Legations, near the so called Mongol market. The proprietor has published a list of 365 drugs obtainable at his store, giving the names in Tibetan and Chinese and adding the pronunciation of the Chinese characters in Tibetan letters. The list is preceded by a short preface and followed by a postscript, both in Mongol and Tibetan. The preface invites ecclesiastics—lama as well as laymen—especially those living in Mongolia and desirous of alleviating the suffering of their fellowmen, to apply to the aforesaid shop for the drugs enumerated in the list in two languages, Tibetan and Chinese. For selecting and arranging this assortment several medical treatises of celebrated physicians are stated to have been consulted. In the postscript it is stated that the drugs offered for sale in the shop of Wan I hao under the above Tibetan names, are not always exactly the same as the original productions of Tibet bearing these names in that country; but their medical virtues are stated to be similar. Purchasers are requested not to suppose that these drugs have been collected without judgment. Besides this the seller directs the attention of the public to the advantage of procuring drugs from a great firm instead of buying them in retail shops. The postscript is signed by Gonbedjan, Professor of the Tibetan school at Peking.

Among the drugs enumerated in this catalogue there are 74 minerals, 22 articles derived from the animal kingdom; the remaining 269 belong to the vegetable kingdom. The greater portion of them can be determined.

The most important guide for identifying Mongol, Tibetan and Manchoo names of natural productions, and especially economic

plants and drugs, is without doubt the great Dictionary in four languages, the 四體清文鑑 *Sz' t'i ts'ing wen kien*, published by Imperial command during the reign of Kang hi. A revised edition of it was issued by order of the Emperor K'ien lung about the middle of last century. The books 27—29 deal with plants, and about 600 names of cultivated and wild species are enumerated there in Chinese, Manchoo, Mongol, and Tibetan. The pronunciation of Manchoo and Mongol names is indicated by Chinese characters. As most of the plants mentioned in this dictionary are known to me from the Chinese names given, I have thus been enabled to ascertain the Manchoo, Mongol, and Tibetan names of a considerable number of common plants of Eastern Asia. Very little has hitherto been done in the way of identifying names of plants in these languages. In Balfour's *Cyclopædia of India* and Watson's *Index of native and scientific names of Eastern Plants* we find occasionally some Tibetan (Ladak) names of plants; Maximowicz in his *Prim. Floræ amurensis* gives 5 or 6 Manchurian names. In Zigra's *Dendrology of Russia* we meet with some Mongol, Tartar, and Kalmuk names. Some names of common plants in the languages of the Kalmuks and the Kirghizes will be found in Professor Galstunsky's *Russian-Kalmuk Dictionary*, 1860, and in Ilminsky's *Kirghiz Dictionary*, 1861.

CHAPTER II.

ON THE SCIENTIFIC DETERMINATION OF THE PLANTS MENTIONED IN CHINESE WORKS.

We now come to the most important, but at the same time most difficult part of our researches. In order that Western science may profit by a study of Chinese botanical works it is necessary not only to understand the Chinese written characters but also to recognize the plants described and to ascertain their scientific names. Our knowledge of the Botany of China is still very defective, more so indeed, it may be safely said, than that

of the Floræ of the interior of Africa and Australia. Those regions of the Empire especially to which the majority of plants described in Chinese books refer, have never been trodden by the foot of a botanical collector. Thus the greater part of the vegetable productions detailed in Chinese works on *Materia medica* and Botany are unknown to Europeans. If the plants in question are not of common occurrence in the provinces visited by them, it is generally impossible to make anything of the vague descriptions given by Chinese botanists. Occasionally the drawings found in the previously mentioned native botanical works enable us to determine at least the genus or the order to which the plants belong. On the other hand, there may be in European collections plants from China, noticed also in Chinese works, but the native names have not been added to the scientific ones.

The only exact method of ascertaining the botanical names corresponding to Chinese denominations of plants is to obtain the plants *in naturâ* and to determine them. I may however observe that, although the common cultivated plants are known under the same Chinese names all over the Empire, many other plants, especially drugs, go under different local names in different provinces. Li Shi chen, the author of the *Pen ts'ao kang mu*, and other authors before him, have attempted to bring these synonyms together, but perhaps they have not always been correct in their identifications. In some instances also the same Chinese names are applied to distinct plants in different parts of China. It is therefore desirable that naturalists, who collect native names of plants, should always state in what part of China these names are used.

The first difficulty we encounter in identifying Chinese names of plants with the scientific appellations, is to secure trustworthy and competent natives to procure authentic specimens of the plants desired. The majority of drugs dealt with in Chinese treatises on *Materia medica* are yielded by wild growing mountain plants. The mountains of Chihli, Shantung, Shansi, Honan,⁴³

⁴³ I have been informed by missionaries, who had lived for some time in Honan, that 馬家橋 *Ma kiu kiao* in the prefecture of Wei hui fu in North Honan is a well-

and Sz' ch'uan are especially famed for the medicinal herbs they produce. These drugs (roots, leaves, flowers, fruits, etc.) for the most part reach the apothecary's shop cut in little pieces or pulverized. The apothecary knows nothing about the plants from which they are derived, nor concerning the place whence they have been gathered. Our specialists in Europe are also seldom able to determine these fragments. It is the same with many other Chinese articles of commerce furnished by plants. It is for instance generally impossible to get any reliable information regarding the trees yielding the numerous precious woods used all over China for making furniture. It is therefore necessary to apply directly to those who collect these drugs, or who fell the trees; and this is not an easy task.

The *ρίζοτάμοι*, as the gatherers of medicinal plants were termed in ancient Greece, are chiefly represented in China by Buddhist priests. They live in the temples which abound in the mountains here, and are usually well acquainted with medicinal and other plants, and with their properties and applications for domestic purposes.

It is more easy to procure authentic specimens of the cultivated vegetation of China and to ascertain the Chinese names. Great caution must however be observed in accepting these names from the statements of the natives, and in order to arrive at a reliable determination, various competent sources of information on the same subject should always be consulted. European collectors of plants in China should never omit to inquire after the Chinese names of the plants they gather, and should try to have them written on their labels in Chinese characters. This is more easy to realize in China, where every beggar knows how to write, than European readers might imagine. Chinese names of plants, rendered only by European spelling, have little value, as errors will frequently creep in, and they are generally unintelligible even for sinologues.

Having obtained specimens of plants and ascertained their native names, the next step essential to the success of our investigations will be to have them determined by a competent botanist.

known market for drugs. The drugs of the province of Chihli are exported from T'ien tsin. See Customs Report 1865, p. 28.

Although Europe abounds in botanists, the number of those from whom a reliable determination of Chinese plants may be expected is very limited. For not only a thorough knowledge of the Flora of Eastern Asia is required for this purpose, but the botanist who sets himself to examine plants, and especially exotic plants, must be in a position which will enable him to refer (for the purpose of identification and comparison of species) to some complete general herbaria in Europe. Now-a-days all botanists agree in the view that it is impossible to recognize and identify plants from descriptions only. To decide whether a particular plant is identical with another already described, it is necessary to compare it with an authentic specimen of the latter, and the author who proposes a new specific name, is bound to prove by direct examination of specimens of all the other species of the same genus or allied forms that the plant in question has really not been previously described.

Prof. A. Bunge, in his Enum. plant. Chinæ bor. (1831) No. 238, took a kind of yellow *Jasmin*, which he first observed in Peking, to be identical with *Jasminum angulare* Vahl, a plant of the Cape of Good Hope (white flowers). He evidently relied only on an imperfect description of this plant. The Peking plant was subsequently proved by Lindley to be quite a distinct species, which then was named *Jasminum nudiflorum*.—Owing to the same want of other collections for comparison, Prof. Bunge described *Prunus trichocarpa* as a new species from Peking. But this plant had long before been described by Thunberg as *Pr. tomentosa* (from Japan).—The same author describes l. c. No. 81 the wild growing Jujube of Peking as a spinose variety of *Zizyphus vulgaris* Lam. One of our first botanical authorities in Europe, to whom I had sent specimens of this thorny shrub, very common in North-China, suggested to me that it was *Z. Lotus*; and the specimens of this shrub of Northern Africa kindly sent to me by him prove that there is indeed no difference between *Z. Lotus* and Bunge's *Z. vulgaris*, var. *spinosa*.—There are in the mountains West of Peking two species of *Syringa*, distinguishable at first sight by the size of their leaves. For a long time the botanists of the Botanical Gardens at St. Petersburg considered the large-leaved species to be *S. villosa* Vahl, first observed near Peking in the middle of the last century by

d'Incarville, whilst the small-leaved one figures in the herbaria of St. Petersburg as *S. pubescens* Turcz. But from Prof. Decaisne's elaborate memoir on *Ligustrum* and *Syringa* I learn that *S. villosa* and *S. pubescens* are the same plant (the small-leaved), and that the other species (*S. villosa* of Russian botanists) is *S. Emodi* Wall., first observed in the Himalayas. Prof. Decaisne had of course seen authentic specimens of all these plants.

The works on systematic botany by Willdenow, Sprengel, Roemer and Schultes and others, published previous to De Candolle's *Prodromus*, have little value so far as they attempt to decide botanical questions relating to China. At least the identification and changing of names of Loureiro's plants, as laid down by these authors, were certainly not based upon an inspection of Loureiro's herbarium.

Sufficient material for determining Chinese plants can only be found in the vast store houses of botanical collections in London, Paris, and St. Petersburg, which are especially rich in Eastern Asiatic plants. We also ought not to omit mentioning in this place the extensive herbarium of Dr. Hance in Whampoa, which as regards Chinese specimens may perhaps represent the most complete collection extant. Dr. Hance possesses also a great number of Indian, Japanese, and Siberian plants, and thus is well qualified to pronounce a competent judgment on questions referring to Chinese plants.

I need not say that the determination of plants requires great experience and attention. Even the most accomplished botanists are liable to err in their diagnoses. We must not forget that in the majority of cases (especially when they have to examine collections from distant countries) they rely entirely on dried materials, and these too, often imperfect specimens which must be deciphered like hieroglyphics of a dead language. Living plants show many characteristics, and very often striking ones, which cannot be recognized in dried specimens, or at any rate are liable to alteration, as, for instance, the colour of the flowers and other organs, their odour, etc. Probably many botanists who know a foreign plant only from herbaria, would often fail to recognize the same at first sight, when met in a living state.

In order to set down a complete and correct description of a plant it is desirable, but seldom practicable, to examine a considerable number of freshly gathered specimens. For this reason botanists in Europe always try to procure seeds of exotic plants for cultivation at home. But it is generally very difficult to get ripe seeds of rare wild growing plants, and the seeds are often spoiled before reaching their destination. Sometimes plants cultivated out of their native country show considerable aberrations from the ordinary wild type. Thus Planchon (D. C. Prod. XVII, p. 173) refuses to identify the *Celtis sinensis* Pers., introduced from China in the last century and cultivated since that time in South-Europe, with the *Celtis sinensis* collected by later authors in China. Compare also Prof. Decaisne's interesting investigations regarding the native country of the Sunflower and the Topinambour (Flore des Serres, XXIII.).

As in most cases botanists, who have to describe foreign plants, cannot refer to living specimens, a critical responsibility rests with the collector who observes the plants in their wild state, and who is often therefore in a position to decide easily dubious botanical questions by examining fresh specimens. In noting down the colours of the flowers and other organs, the odour, the general appearance and the stature of the plant, the conditions under which it grows, wild or cultivated, and in adding also in the memorandum, if possible, the native name,⁴⁴ the collector will essentially complete the descriptive details of the botanist. But in the generality of cases the collectors of plants pay little attention to these particulars; and then it is their fault and not that of the describer that the descriptions of foreign plants in systematic works are generally so unsatisfactory, and that often those characteristics, by which an observer of the living plant is struck

⁴⁴ It is a good practice with some botanists who describe new plants, to preserve in the new generic or specific names the indigenous popular appellations, where known. Among Chinese names of plants introduced into our scientific botanical nomenclature, I may quote: *Magnolia Yulan*, *Paeonia Moutan*, *Diospyros Shilze*, *Nandina domestica*, *Nephelium Litchi* and *N. Longan* (Lung yen). This rule should be more generally adopted. But unfortunately the fashion now-a-days cherished among botanists is to transform names of savants or other persons (who frequently have had nothing to do with the plant dedicated to them) into botanical names, which are often dissonant and difficult to pronounce.

at the first glance, are omitted. Let me illustrate these remarks by a few examples.

Stachys affinis Bge., known for a long time from North-China and Japan, is at once distinguished from other species by its fleshy root resembling somewhat a turreted shell. Maximowicz, to whom I sent complete specimens some years ago, was the first author to mention the characteristic roots of the plant. See his "Ad Floræ Asiæ orient. cogn. fragm." 1879, p. 46.

Pinus Bungeana, the beautiful white-barked Pine of Peking, was first described in 1847 by Zuccarini, and has been cultivated in Europe since 1862. The most remarkable feature of this tree is its white bark, as if lime-washed. But this characteristic (not found on young trees) was for a long time unknown to European botanists and gardeners, and is still little known in Europe. Koch in his Dendrology III, p. 311 (published 1875) describes *P. Bungeana*, but does not mention the white bark.

Every foreigner, who visits Peking for the first time, is struck by the appearance of a certain large orange-coloured fruit sold in the streets. It is especially remarkable for the peculiar shape it presents. This fruit, called *Shi tz'* by the natives, is flattened and shows a more or less deep circular furrow which divides it into two stories. This is the *Diospyros Shi tse*, first described by Bunge, fifty years ago. But Bunge says only in describing the fruit: *bacca maxima depressa*, but does not mention the furrow. Since Bunge several authors have described *D. Shi tse* (Carrière, Decaisne, Hiern, Naudin), but none of them record the peculiar shape of the fruit; and the drawing given under the above name in Naudin's lately published memoir on the genus *Diospyros* shows a rather small globular fruit, like an apple, without the characteristic furrow, and represents, I believe, specimens cultivated in France, from seeds received from Peking. It seems however that the passage in Naudin's description of the fruit: *bacca interdum ad mediam longitudinem quasi constricta coronata*, alludes to the before-mentioned peculiarity of the cultivated *Shi tz'* of North-China, which is always aspermous. But the fruit cultivated in France as *Shi tz'* and represented by Naudin, exists here, although it is not common in Peking. It is not the fruit

which Bunge saw and which he describes as *bacca maxima depressa, asperma*, since it always contains seeds, whilst the other is propagated by grafting only.

It seems to me that Bentham's *Flora hongkongensis* can be adduced as an example of short, popular and characteristic descriptions of plants, and, although the precision and correctness in exhibiting the details is due to the experience of the eminent author, a considerable portion of the information about Hongkong plants has certainly been furnished by the collectors, and chiefly by Dr. Hance, who for many years has zealously studied the Flora of the island.

Occasionally the most experienced botanists are liable to errors when working on dried imperfect material, whilst on the other hand persons even with a modest stock of botanical knowledge, but having the opportunity of observing plants in their native countries, are enabled to clear up dubious botanical questions and to correct incontestably statements of professional authors.

In Turczaninow's *Enum. plant. Chinæ bor.* (1837) and Maximowicz's *Index Floræ pekin.* (1859) we find two Peking species of *Catalpa* noticed, viz.: *C. syringæfolia* Turcz., and *C. Bungei* C. A. Mey. In D. C. *Prodr.* IX, 226 the first is considered a variety of the latter, distinguished by the form of the leaves. But whoever has seen these trees in Peking, where they are common, will be easily convinced that they constitute one species only, and that even a variety cannot be admitted, the leaves on the same tree being always very variable in shape, heart-shaped, entire, lobed or laciniated, triangular, sinuate, etc.

The same may be said of *Sesamum indicum* L., much cultivated in the Peking plain. In D. C. *Prodr.* IX, 250 three varieties of this cultivated plant are distinguished, according to the form of the leaves (*grandidentatum*, *subdentatum*, *subindivisum*). But this distinction is also untenable. Here at Peking at least we frequently see on the same plant entire, lobate, or trisected leaves. I have sent such specimens to St. Petersburg.

The Chinese in the Northern provinces cultivate a beautiful *yellow Rose*, very prickly, with small pinnated leaves. I have been told that it occurs in a wild state in the mountains of North-China and Southern Mongolia. This Rose figures in Bunge's

Enum. Chin. bor. as *Rosa pimpinellifolia* L., varietas floribus majusculis sulphureis. The specimens of the same plant in the Herbarium of the Botanical Gardens at St. Petersburg (some of them sent by myself) have been determined by Crépin as *R. pimpinellifolia*, var. *densiflora*, and in his Monography of Roses (Bull. Soc. Bot. Belg. 1874, 75) he mentions *R. pimpinellifolia* as found at Peking, without noticing however its yellow flowers (on dried specimens the flowers are white). Crépin, as well as all previous authors who speak of *R. pimpinellifolia*, attribute to this Rose, which has a large area of geographical distribution, rose-coloured or white flowers. Last year I forwarded some specimens of our yellow Peking Rose—taken from the same shrub in my garden as those sent to St. Petersburg—to an eminent French botanist, who informed me that it differs widely from *R. pimpinellifolia* of the environs of Paris, but seems to be closely allied to *Rosa xanthina* Lindl., and is perhaps the same.

Five species of *Orobanche* have been noticed by different authors as occurring at Peking, viz.: two with white flowers: *O. macrolepis* Turcz., and *O. pycnostachya* Hce.—three with blue flowers: *O. ammophila* C. A. Mey., *O. albolanata* Steud. (*O. canescens* Bge.); *O. ombrocharis* Hce.—Mr. Maximowicz, who some years ago was kind enough to determine for me the species of *Orobanche* I had gathered in the Peking mountains, and who on that occasion examined all the species of this genus from Peking found in the herbaria of St. Petersburg—suggested to me by letter that the characteristics on which these species are founded (lower lip of the corolla entire or bilobate; anthers barbate or glabrous) are fallacious and inconstant, and that from dried specimens alone it is impossible to decide whether the lower lip is bilobed or not. As these plants are succulent it is difficult to press them properly, and the flowers shrivel. Maximowicz, who seems disposed to think that the five described species of *Orobanche* are to be reduced to two species, requested me to examine the flowers of the living plants. I have not yet had an opportunity of doing so, as these plants grow in the mountains; and I was not able last year to visit the regions where they are found at the proper season. But from my former experience on the subject I have no doubt that Maximowicz is right in

his supposition, and my own impression has always been that the genus *Orobanche* in the Peking Flora is represented by two species only: one scentless blue-flowered, and one fragrant with white flowers and yellow filaments and anthers.

In 1866 Dr. Hance described in the *Ann. sc. nat. Advers.* p. 18 (see also *Journ. of Botany* 1869, 295) *Sambucus Williamsii* as a new species gathered in the neighbourhood of Peking by Dr. Wells Williams. The inflorescence arranged in a lax compound corymbe is given as characteristic. I myself gathered a number of specimens of a *Sambucus* growing at the same place. Maximowicz declared it to be *S. racemosa* L., which is frequent in the Peking plain and in the mountains. See also Bge. *Enum. Chin. bor.* No. 193. The inflorescence of this species (generally described as an ovoid panicle) varies in shape at Peking. On younger plants (rarely seen in flower and distinguished by larger leaflets) the panicle does not develop so well as on old specimens (small trees). Although I have not seen Dr. Williams' original specimen, I have little doubt that it was taken from a young plant of *S. racemosa*. Dr. Hance has hardly examined a great number of specimens of his *S. Williamsii*.

A great obstacle in the way of utilizing the results of modern botanical research is the tendency observable among the majority of botanists of our days to multiply unreasonably the genera and species. They thus create a mass of new names, the greater part of which, being rejected by more considerate authors, figure afterwards as useless synonyms in works of descriptive botany, and occasion a kind of scientific confusion of names which leads to erroneous inferences. Some botanists even go so far as to propose to change (without any botanical reason) names, consecrated by long use, in favour of new ones, which seem to them more appropriate. See e. g. St. Lager's *Réforme de la Nomenclature Botanique.* 1880.

It is in vain, that we ask what benefit can accrue to science from the extravagant subtilization and differentiation now prevailing in systematic botany, by which the study of that science is rendered so complicated. Nobody will, I think, now-a-days attempt to maintain the view that it lay in the plan of nature, in producing living beings, to create them according to a scheme

resembling the so called natural systems by which our naturalists are guided. These ingenious systems answer their purposes only in a general way. In many instances we do not find in living nature precisely defined and exactly divided Orders, Genera, and Species; but we observe more frequently gradual transitions by more or less numerous intermediaries (which often have become extinct now) from one form to another. It is even not possible to separate precisely the vegetable from the animal kingdom. These facts render the application of our systems of classification to natural objects often difficult.

When Linnæus first attempted to group plants in a rational way, according to certain characters they possessed in common, and when he first proposed the generic and specific appellations, one of his principal objects in view was apparently to establish a reasonable rule for nomenclature. His ingenious plan was un-animously adopted, but it is to be regretted that the principles now followed in laying down the limits of genera and species widely diverge from the good sense displayed in this regard by old Linnæus. A system of classification answering all purposes of precise distinction is a desideratum which will never be attained. Although it seems to be of primary importance to have a definite idea of what is to be understood by Genus, Species, and Variety, these terms have never been satisfactorily explained, and they have really not a very exact meaning. This question is entirely left to the judgment of the particular authors; and every botanist has his own opinion on the matter and follows generally a system of his own. Thus we find in systematic botany the greatest incongruities in the matter of distinctive characters required to justify the establishing of a new genus or species.

From a practical point of view, and for the sake of clearness, it seems to me more reasonable that the range of genus and species should be less limited, *i. e.* to admit less genera and more species; and on the other hand, less species and more varieties. If such a rule were adopted, the botanical names would more clearly indicate the affinities of plants than the multitude of new generic and specific appellations, separated from the names of the original genus and species—separations which are often founded on characteristics of little value. Take the genus *Begonia* of Linnæus

as an example. It has been divided by Klotzch into 41 new genera. Bentham and Hooker, in their *Genera Plant.* I, 842, reject these altogether, admitting only the genus *Begonia*.

The number of names of plants met now-a-days in botanical works is enormous; and it can hardly be supposed that there is a single botanist who would be able to retain in his memory even the generally admitted generic names, to say nothing of the synonyms.

I know well that in entering a protest against the multiplication of generic and specific names in botany, I tread on delicate ground. I would never have dared, with my modest knowledge and experience in botanical matters, to profess an opinion so little coinciding with the ideas of the majority of botanists, had not my judgment been principally guided by the experiences laid down in Bentham and Hooker's *Genera Plantarum*. The eminent authors of this work reject about one-half of the hitherto proposed genera (or assign to them the rank of subgenera at the most). As regards the hitherto described species, they seem to reduce them in a much larger proportion and throw together large heaps of useless synonyms. Thus they reduce the species of *Roses* from 250 enumerated species to 30; those of *Rubus* from 500 to 100; of *Cinnamomum* from 50 to 10; of *Nasturtium* from 80 to 20; of *Gossypium* from 13 to 3—4, etc. Other competent botanists, having made experiments in cultivating the various species of *Capsicum*, described in systematic works, have come to the conclusion that all cultivated *Capsica* are nothing but varieties of *C. annum* L.

I would not like to be credited, however, with advocating a superficial examination of plants, and a generalization in the descriptive details; nor have I any fault to find with a minute differentiation and dividing in systematic botany, supposing these characters apply to subgenera and varieties, and are not intended to raise plants unreasonably to generic or specific rank. It cannot be denied that a careful distinction of the characters, and numerous divisions and subdivisions in systematic works essentially facilitate the determination of plants. But an extravagant nomenclature cannot but confuse the notions which systematic botany ought to exhibit with respect to the relative affinities of plants.

I am inclined to believe that in the majority of instances the irrelevant naming of new species and genera arises from vanity in some writers, desirous of affixing their names to new scientific appellations. For this reason botanists are often in a great hurry to establish a new species, based perhaps upon the examination of a single specimen or other inadequate material, as even in case of this new name being subsequently rejected, it remains at least preserved among the synonyms. I do not think that I am exaggerating in asserting that more than one-half of the new specific names now-a-days proposed may be considered as useless synonymic ballast. Would it not be better in describing a supposed new plant to give its more prominent characters, placing it temporarily as a variety near the species to which it is most nearly allied, and to wait for further material? But there is less merit in discovering a variety than a new species!

It is really astonishing to read what characteristics are sometimes adduced as foundations for a new species. Carrière (*Revue Hort.* 1860, p. 30) describes *Celtis Davidiana* as a new species from Peking. Although he had not seen either the flowers or the fruit, but only the leaves, he declares it "une espèce très distincte par ses feuilles." Planchon (*D. C. Prodr.* XVII, p. 172) maintains this species, but considers it as imperfectly known. He states however: A *C. sinensi* differt foliis basi minus obtusis nunquam subcordatis, reticulo nervulorum laxo et vix conspicuo nec densiusculo et prominente, colore læte viridi nec exsiccatione rufidulo—a *C. Bungeana* (also described as a Peking species) foliis saturatius viridibus nec exsiccatione glaucescentibus.

The authors, in founding a new species upon the colour of the dried leaves only, seem to be ignorant of the fact that the same leaves, according to the method of drying them (quickly or slowly), often assume very different colours. Old leaves are much darker than young leaves of the same tree. Sometimes, as in the case of *Sophora japonica*, the leaves of young specimens are quite different in shape from those of old trees. Maximowicz, who has had ample opportunity of elucidating this question with the help of the Peking specimens of *Celtis* in the herbaria of St. Petersburg, refers them all to *C. sinensis* Pers. (see his *Decas.* XIII, p. 27), and identifies the latter also with Thunberg's *C. orientalis* of Japan

(*C. japonica* Planch.). My own experience agrees with Maximowicz's view. I am not able to distinguish more than one species of *Celtis* in the neighbourhood of Peking, where the tree is frequently seen in the plain and in the mountains. Its leaves vary in shape on the same tree, being generally ovate, oblong, but sometimes also cordate. They are either perfectly smooth or rough to the touch (especially on young trees). I have sent specimens with variously shaped leaves on the same branch to the Muséum d'Histoire naturelle of Paris. Its drupes are always black when ripe. A specimen of the Peking tree sent in 1869 to Dr. Hance was determined as *C. sinensis*. The latter is mentioned also in the *Flora hongkongensis*.

Carrière describes also (*Revue Hort.* 1867, p. 340) two new Poplars from China, again only from a few leaves he had received, viz.: *Populus tomentosa* and *P. Simoni*, although it is known that the leaves of some Poplars are very liable to variation. Maximowicz thinks (*Fragm. Floræ Asiæ orient.* p. 49) that the first is the common *Populus alba*.

In another instance Carrière does not hesitate to apply the new name of *Ailantus flavescens* to a young plant received from China and cultivated in Paris (*Revue Hort.* 1865, p. 366). But when ten years later the tree first flowered, it turned out to be *Cedrela sinensis* Adr. Juss., belonging to quite a different order (*ibid.* 1875, p. 86).

The same French botanist (*ibid.* 1867, p. 451; 1868, p. 10; 1870, p. 17) has named four (supposed) new species of *Ampelopsis* from North-China, viz.: *A. palmolata*, *A. dissecta*, *A. tuberosa*, and *A. napiformis*. He was evidently not aware that the Flora of North-China had been previously studied by Dr. Bunge, who described the same plants under other good specific names; and thus Carrière produced four useless new names.

Botanists in Europe, when receiving cultivated specimens from foreign countries, generally have no scruples in describing them as new species, without taking into consideration the variations which cultivation may have brought about in these plants. Thus *Gossypium Nanking*. Meyen, *Nicotiana chinensis* Fisch. (*D. C. Prodr.* XIII, 1, 559), and *Arena chinensis* Steudel (*Gram.* 231),

have been put forward as new species cultivated in China, and not known from elsewhere. But it is a well-established fact that Cotton was unknown in China before the 6th century, and that its cultivation in this country began only in the 11th century. Tobacco, introduced from Manila in the 17th century, was previously unknown in China. *Acena chinensis*, considered by some botanists a variety of our European *A. nuda*, is even not distinguishable from the latter species.

This unhappy tendency of botanists to discover new species even among common cultivated plants renders the interesting researches into the geographical distribution of plants and the history of cultivated species very difficult, and leads to erroneous conclusions. It seems to me of greater interest to prove that the range of a known European plant extends as far as Eastern Asia, than to discover there one or more new species of the same genus.

Artemisia indica L., *A. igniaria* Maxim., and *A. lavandulæfolia* D. C. have been described as distinct Chinese species. Maximowicz has shown (Decas. XI, 536) that they are all identical with the common European *A. vulgaris* L., or slight varieties of it.

Galium pauciflorum Bge. (Peking), *G. sororium* Hance, and *G. strigosum* Thbg. (Japan), are according to the same author (D. XVI, 259) all identical with our common *G. Aparine* L.

In the same way Maximowicz considers *Ulmus pumila* Pall. (Eastern Siberia, Mongolia, North-China) as a variety of our common *Ulmus campestris* L. Planchon's *U. Davidiana* from North-China seems also to belong to the same species.

The multiplication of synonyms, increasing every year, and the conflict of opinion of authors as to the place and rank to be assigned to a plant in the system, have become a serious evil and inconvenience to all who have to deal with modern botany. It is impossible to obtain any uniformity of view among authors in this regard. Owing to this unsettled state of nomenclature in botanical science, the original design aimed at in giving a name to a plant, *i. e.* to distinguish it at once from other plants, becomes quite ineffective. Sometimes it may be more intelligible to quote a popular name of a plant than a scientific one.

Collectors, who may send the same plants for determination to several competent botanists, will be struck when comparing the

lists of the determined species, by the disagreement between the botanists in many instances, which it is sometimes impossible to account for. What does this prove? Certainly not the inadequacy of the botanists who determine the plants, but rather the difficulty of drawing in every case a clear line of distinction between two or several species. In order to convince himself how widely the opinions of different authors diverge with respect to the same plant, its place in the system and its specific name, the reader has only to compare the various monographs on *Roses*, *Allium*, *Iris*, *Diospyros*, etc. published during the last few years, —or he may open any volume or page of De Candolle's *Prodromus* and examine the host of synonyms found there, and the errors which botanists impute to each other.

It is a remarkable fact that those botanists who dispose of vast materials, and who in their investigations can refer to a great number of species of the same genus, as for instance the authors of the *Genera Plantarum* in London, and the botanists of St. Petersburg, are generally inclined to generalize and, while admitting a wide range of specific variations, to restrict the number of species; for they are often called upon to compare a long series of intermediate forms standing between two seemingly quite distinct species, but connected by transitions, and they then have the alternative of combining the two species and the intermediaries into one species with several varieties, or of creating a great number of new specific names. The sound and practical view entertained in this regard by eminent and experienced authors should be more generally adopted and appreciated than is the case. The question is not to recognize a "scientific truth," but merely to assent to a "practical rule" in the way of generalizing and simplifying the intricate state of botanical nomenclature, which will render systematic botany more useful and accessible for reference.

After this digression from the main subject of our investigations let us now show what has been already done in the way of scientific determination of the plants mentioned in Chinese books.

As has been detailed in a lately published paper on the early history of botanical discoveries in China, it is to the Jesuit missionaries that we are indebted for the earliest notices of the more conspicuous plants of China and their native names; but their early publications on botanical matters contain merely popular descriptions and accounts of Chinese plants, and do not deal with scientific names. The first scientific work treating of the Flora of China which attempts to give the Chinese equivalents for the botanical names of some Chinese plants, is Loureiro's *Flora cochinchinensis*, 1788. I should also mention in this place Osbeck's *Voyage to China and the East-Indies*, published about thirty years earlier than the *Flora cochin*. Osbeck, in enumerating and describing 244 plants which he had collected near Canton and which had been determined by Linnæus, occasionally gives the transliterated Chinese names, but these are generally sadly perverted. As regards the Chinese names of plants found in Loureiro's book, they are for the greater part correct, and have subsequently served as a basis for investigations of the same kind.

In 1822 Morrison gave in his *English and Chinese Dictionary*, p. 174, under the head of "Flowers," a list of plants which flower in each month of the year in Canton, containing 148 native and scientific names, for which Morrison states he was indebted to J. Reeves. J. Russel Reeves, who died in 1877, aged 73 years, resided for a long time in Canton. He was in the East-India Company's service, and seems to have arrived in China about 1815. Reeves was an able naturalist and made valuable botanical collections. He published an account of some of the articles of the *Materia medica* employed by the Chinese. 1826.

The 14th chapter of Bridgman's *Chinese Chrestomathy* (Macao 1841) deals with Chinese Botany. This as well as the two other chapters on Natural History (13 and 15, Mineralogy and Zoology) were prepared by Dr. S. Wells Williams, the well-known sinologue, now Professor at New Haven. We find there 445 names of Chinese plants, with the corresponding popular English or scientific appellations. A similar list, comprising 353 names of Chinese plants, is given in Dr. Williams' *English and Chinese Vocabulary in the Court Dialect*, Macao 1844, under the word "Flower." It seems

that these identifications have partly been derived from Loureiro's *Flora cochinchinensis*.

In the same year Dr. Williams published the first edition of his valuable *Chinese Commercial Guide*, the 5th and last edition of which appeared in 1863. In the chapter devoted to Chinese Articles of Export a good many scientific names of Chinese economic plants are found. The first attempt to examine the Chinese articles of export, or to bring together the scattered notices of them, had previously been made by Morrison. See "Chinese Repository" II. 1834, p. 447—472. The Report of the commercial delegates attached to the French Embassy of M. de Lagréné, 1844—46 (see *Etude pratique du Commerce d'Exportation en Chine*, par N. Rondot, 1848), was also made use of in the compilation of the later editions of Dr. Williams' Commercial Guide. But there is a great deal of original matter to be found in this book, and a sound critical sense displayed in utilizing the material furnished by previous authors.

An article published in Vol. VII. (1848) of the "Repertorium für Pharmacie und practische Chemie in Russland," p. 565 sq., by G. Gauger, and entitled *Chinesische Roharzneiwaaren*, may be considered as the first attempt to examine and describe Chinese drugs.⁴⁵ The 54 Chinese drugs described by Gauger were placed in his hands by Dr. P. Kirilov, who from 1832 to 1840 was attached as a physician to the Russian Ecclesiastical Mission at Peking, and whose name is connected with many new Peking plants transmitted to the Botanical Gardens of St. Petersburg, or to his friend N. Turczaninov. Gauger gives a detailed description of these drugs and of their physical properties, accompanied by drawings. The Chinese names are also added, but only in European spelling. As regards the botanical origin of these drugs, Gauger ventures in a few cases only some suggestions.

Dr. A. Tatarinov's *Catalogus Medicamentorum sinensium*, published at St. Petersburg in 1856, has a far higher value. Tatari-

⁴⁵ Andr. Cleyer, of whom I shall speak further on, published in 1682 a small treatise: *Medicamenta simplicia Chinensium*, enumerating 289 Chinese drugs with the Chinese names according to Portuguese orthography, But this pamphlet, translated by Father M. Boym from some Chinese treatise, and without annotations or identifications, has no scientific value.

nov resided in Peking from 1840 to 1850 as physician to the Russian Ecclesiastical Mission. During his long sojourn there he zealously applied himself to the study of the Flora of North-China. He forwarded large botanical collections to the Academy and the Botanical Gardens of St. Petersburg. The Chinese names of the plants are frequently given on the labels attached to his specimens. The Catalogus contains the Chinese names in Chinese characters, with their sounds expressed both in Russian and Latin spelling, of 480 drugs, for the greater part collected by Tatarinov in the Peking apothecaries' shops, and subsequently examined and determined by Prof. Horarinov of St. Petersburg. The scientific names of the Peking plants yielding these drugs were determined from direct examination of the plants collected by Tatarinov. As to the rest the authors seem to rely upon Loureiro and Grosier (*Description de la Chine*, 1819). All the drugs previously described by Gauger appear also in Tatarinov's list.

Besides these collections Tatarinov presented to the Academy a beautiful set of botanical drawings representing 452 wild plants of the Peking Flora. These carefully coloured drawings, showing also the botanical details of each specimen, were executed from nature by a Chinese artist under the direction of Tatarinov, who also added the Chinese names in Chinese characters. Dried specimens of the same plants are to be found in the St. Petersburg herbaria.

In 1859 Tatarinov accompanied General Ignatiev as interpreter to Peking. He retired from service a long time ago, and now lives in Penza, his native city.

I have seen a series of illustrations of Chinese plants similar to those in Tatarinov's collection in the possession of Mr. C. A. de Scatchkoff, who was Director of the Russian Meteorological Observatory in Peking from 1850 to 1857, and subsequently Russian Consul in Kuldja and Consul-General in Shanghai. Mr. Scatchkoff, who devoted himself to the investigation of Chinese Agriculture, and who has published many interesting papers on the subject, has also transmitted valuable botanical collections (comprising many cultivated plants) to St. Petersburg, where they have been determined. In the memoranda accompanying his specimens the Chinese names are generally given. He had

engaged a Chinese artist to paint for him from nature the economic and ornamental plants cultivated at Peking. These valuable drawings give also the botanical details of each plant.

As has been stated in a previous chapter, the Japanese early adopted Chinese names for their medicinal, economic and other plants. But, although they have generally tried to apply a Chinese appellation of a plant to the same plant in Japan, it often happens that a plant in Japan bearing the same name as in China belongs to a different species; in some instances even quite dissimilar plants are designated by the same Chinese characters in the two countries.

The first attempt of a European to study the Flora of Japan was made by Andr. Cleyer, a German, who visited Yeddo in 1683 as envoy of the Dutch East-India Company, and resided in Nagasaki as chief supercargo of the Dutch factory till 1686. His letters on Japanese plants addressed to Dr. Mentzel have been published in the *Academiae naturæ curiosorum Ephemerides*, 1686—1700. Cleyer's descriptions as well as the drawings appended have little value. The Japanese names are sadly perverted. Sprengel in his "Geschichte der Botanik," II. 68, gives the scientific names of as many of Cleyer's plants as it was possible to ascertain. The botanist Ch. H. Erndtel, in a letter dated Dresden 1716 and addressed to Jac. Breyn of Dantzic, refers to a collection of 1360 Japanese drawings of plants on paper of the Paper mulberry, which Mentzel had received from Cleyer and which he had subsequently presented to the Royal Library at Berlin. In 1878, when I visited Berlin, I saw these drawings and was much disappointed, for they were miserably and inaccurately executed, and have no scientific value. The paper used is of an inferior kind and not that manufactured from the bark of *Broussonetia papyrifera*, as Erndtel asserts.

But there is in the same Library another volume entitled *Cleyer's Flora japonica*, containing only 101 coloured drawings of Japanese plants, apparently painted from nature in Japan by Cleyer's order. These have more claim to botanical correctness. Cleyer has himself added some memoranda. The names are given in Japanese letters only. This volume was referred to Dr. Siebold, who in 1856 drew up an Index of the drawings and added the scientific botanical names.

A few years after Cleyer had left Japan, another German, an able explorer and botanist, arrived in that country and spent about two years there. Engelberth Kaempfer was born in 1651 at Lemgo (Lippe-Detmold). In 1683 he accompanied a Swedish Embassy to Persia as Secretary, but on its return he separated from it and proceeded to the Persian Gulf, where a Dutch fleet was stationed at that time. In 1685 he entered the service of the Dutch East-India Company as a surgeon, and arrived at Batavia in 1689. In the following year a Dutch squadron was sent out to Siam and Japan, and Kaempfer was of the party. On the 22nd September 1690 he reached Nagasaki. He had two opportunities of visiting Yeddo, performing the journey thither partly by the overland road, partly by sea. His first stay in Yeddo lasted from March 13 to April 5, 1691; the second from March 31 to April 29, 1692. He left Japan in the same year, returned to Europe in 1694, and died in 1716 in his native country. For further biographical details regarding Kaempfer see Rosny's "Variétés orientales," 1872, p. 98, where an interesting account of his life and his scientific works is found. Kaempfer was not only a skillful botanist, but an acute observer in general. He has connected his name imperishably with the history of botanical discoveries in Japan, and the accounts he noted down with respect to the Japanese Empire and other countries he visited will always stand as a model of accurate and judicious information and keen observation. In 1712 he brought out his *Amœnitates Exoticæ*. The second fasciculus (p. 466) contains an account of the plants from which paper is manufactured in Japan; in the third fasciculus (p. 605) a treatise on the Tea-shrub is found. Besides this the whole of the fifth fasciculus (p. 767—912) is devoted to the description of more than 500 species of Japanese plants, 31 of which are represented by excellent drawings. The Japanese names of the plants are always given, and Chinese names in Chinese characters are generally added. Although these characters are often wrongly or indistinctly printed, there is no difficulty in deciphering them. Kaempfer's botanical descriptions are generally faithful, in some instances much detailed.

The *Amœnitates Exoticæ* represents only a small portion of

Kaempfer's labours. After his death all his unpublished manuscripts as well as his herbarium, namely the plants collected in Japan and his drawings of Japanese plants, were purchased by Hans Sloane, the well-known collector and promoter of science, whose immense collections subsequently gave origin to the British Museum. In 1727 Kaempfer's valuable *History of Japan*, etc. was published in English, translated from his original (Dutch) manuscript. In 1791 Sir J. Banks edited a volume with the title: *Icones selectæ plantarum quas in Japonia collegit et delineavit E. Kaempfer, ex archetyp. in Museo Britannico asservatis*. It contains 59 plates.

After Kaempfer the first botanist to visit Japan was C. P. Thunberg, a Swede, born in 1743, died in 1822. He landed at Nagasaki in 1775, and on the 4th March of 1776 proceeded by the overland route to Yeddo, where he arrived on the 30th June. As the fruit of the botanical collections made during his stay in Japan he published in 1784 his *Flora japonica*, to which 39 drawings of Japanese plants are appended. Besides this he published in 1794 his *Icones Plantarum japonicarum*, 50 plates. I have seen in St. Petersburg another unpublished volume of drawings representing Japanese plants, executed from nature by order of Thunberg. As a scientific botanical nomenclature did not exist at the time when Kaempfer wrote, Thunberg tried to name those Japanese plants described in the *Amœnitates exoticæ*, which had not been previously determined and named by Linnaeus, and to identify the native names mentioned by Kaempfer.

Much more was done in this respect by Dr. Siebold, the well-known and ardent explorer of Japan.—Ph. Fr. v. Siebold, a German, was born in 1796 in Würzburg. After having studied medicine and natural sciences he went to Holland, and entering the service of the Dutch East-India Company, set out for Batavia, where he arrived in 1822. The next year he was sent as a physician and naturalist to Japan. He lived several years in the Dutch Factory at Decima (Nagasaki). In 1826 he had an opportunity of visiting Yeddo. As the Japanese government suspected him of being in possession of a map of Japan, he was obliged to leave the country in 1830, and returned to Europe,

where he employed himself for several years in publishing the results of his researches in Japan. In 1859 he went again to that country, where he lived till 1862. He died at Munich in 1866.—Siebold had forwarded one portion of his vast botanical collections accumulated in Japan to Prof. C. L. Blume in Java, who described some of these plants in the *Museum botanicum Lugduno-Bataavorum*, 1849—51. H. Zollinger published a few years later an Index of Siebold's plants in the Java Herbarium (Buitenzorg). The greater part of his dried plants, however, had been transmitted by Siebold to the Museum of Leyden, and from these materials Prof. Miquel compiled his *Probusio Floræ japonicæ*, 1865—67. Siebold himself, with the assistance of Prof. J. G. Zuccarini of Munich, had commenced much earlier to describe his Japanese botanical collections, but their publications were left in a fragmentary state. The most interesting of them is the *Flora japonica, sive plantæ quas in Imperio Japonico collegit, descripsit, ex parte in ipsis locis pingendas curavit Dr. Ph. Fr. de Siebold, digessit Dr. Zuccarini*, 1835—1844, 127 plates. Miquel attempted to continue this iconographical work and published, from 1868—1870, 23 additional plates.⁴⁶ The original drawings to which Siebold alludes on the title pages (about 600) have been purchased, together with a set of Siebold's dried Japanese plants, from his widow, by the Academy of St. Petersburg. The drawings form eight large volumes and are beautifully executed.

Siebold always tried to ascertain the Japanese names of the plants he gathered, and also noted down the Chinese characters applied in Japan to these plants. He was assisted in this task by native botanists, and we can, I think, assume that his identifications are quite reliable.

In 1852 J. Hoffmann and H. Schultes published a small pamphlet entitled: *Noms indigènes d'un choix de Plantes du Japon et de la Chine*, d'après les échantillons de l'herbier des Pays Bas. A new enlarged edition of this list was issued in 1864. It is an

⁴⁶ I know only the 127 plates published by Siebold and Zuccarini. Franchet and Savatier, Enum. plant. Japon., Pref. XIII., state that in all 175 of these plates have been published, but in the second vol. p. 665 the authors assign to the *Flora japonica* 150 plates only.

Index of 6—700 plants of Japan (not of China, as might be inferred from the title), with the scientific botanical names and their equivalents in Japanese and in Chinese characters used in Japan to designate these plants. The authors of this list depend entirely upon Siebold's identifications, and, as has been already explained, it is a mistake on their part to assert that the Chinese characters they give are always referred by the natives to the same plants, both in Japan and in China.

The late Dan. Hanbury, well known for his numerous papers elucidating the history and the botanical origin of drugs, described in the "Pharmaceutical Journal," 1860—61, a collection of Chinese drugs, received from Shanghai, under the title of *Notes on Chinese Materia medica*. It was reprinted, after the author's death, in 1875, by J. Ince in D. Hanbury's Science Papers, p. 209—277. This pamphlet, illustrated by numerous wood-cuts, and giving the Chinese names in Chinese characters of 141 drugs, 83 of which are derived from the vegetable kingdom, is a very valuable contribution to our knowledge of Chinese Materia medica.

The same cannot be said with respect to the *Essai sur la Pharmacie et la Matière médicale des Chinois*, published in 1865 by a French Pharmacologist, O. Debeaux. He was attached to the French army in China in 1860, and had an opportunity of making botanical and other collections at several places in China. He is also the author of an article on the *Tinctorial Plants of China*, of a *Florula of Shanghai* (1875), a *Florula of Chefoo* (1877), and a *Florula of Tientsin* (1879). In all these papers we meet with a profusion of Chinese names of plants expressed in French spelling, but in the majority of cases they have no resemblance to the real ones. In my article: *On the Study and Value of Chinese Botanical Works* (1871), p. 47, 48, I have given some specimens of the information supplied by Debeaux with respect to Chinese Botany, and shall therefore not return to the subject.

Ten years ago (1871) Dr. Fr. Porter Smith brought out a book with the title *Contributions towards the Materia medica and Natural History of China*, which has often been quoted as a standard work in this department by people who cannot discern its real

value, and who rely upon the assurance with which the author's information is presented. Dr. P. Smith's book indeed contains notices of a great number of Chinese drugs: Chinese and scientific names are always given and identified without any hesitation. One might believe that Chinese Pharmacology is as well known to Europeans as our own drugs are to us, and that Dr. P. Smith has left nothing to be done in this department. But if any one attempts to examine the matter thoroughly, he will soon be aware of the arbitrary character of his identifications and of the insufficiency of the knowledge we really possess with regard to Chinese drugs and economic plants. Thus, P. Smith's scientific denominations of Chinese plants, being drawn without any critical discernment from trustworthy and untrustworthy sources, have little value and render his book unreliable for any scientific purpose. It cannot however be denied that there are in it many interesting accounts, translated from Chinese works, relating to the medical virtues ascribed by the Chinese to their drugs.

Three years after P. Smith's book on Chinese Materia medica was published, a compilation of the same character appeared in French, with the title: *La Matière médicale chez les Chinois*, par le Dr. J. L. Soubeiran et M. Dabry de Thiersant, Consul de France en Chine, 1874. Although professing to be an original work, it is nothing but a compilation from P. Smith and Debeaux, made without criticism and without the Chinese characters of the native names. The best portion of the book is the able preface by Prof. Gubler.⁴⁷

Such are the sources from which in Anglo-Chinese Dictionaries of later date, and also in the Reports on Trade at the Chinese

⁴⁷ In a letter addressed to me by my late friend Dan. Hanbury, in Dec. 1873, I find the following passage:

"I recently forwarded to you Soubeiran and Dabry's work on Chin. Materia medica —not on account of its scientific value, which is small indeed, but because it is proper that you should have at hand all such books, good or bad. What can we say of such statements as that the *Dragon's Blood* of the Chinese is derived from *Pterocarpus Draco*, a tree only known to grow in Tropical America? Or that the *Valeriana celtica* of the Styrian Alps grows in Szechuen and Shensi? or that *Santalum Freycinetianum*, a native of the Sandwich Islands, is found in CochinChina? (p. 278, 160, 157), and many, many similar assertions for which no 'pièces justificatives' are offered. It is impossible to speak with commendation of this work. It is largely copied from P. Smith, whose errors it adopts and repeats."

Treaty Ports, the scientific names for Chinese plants have been derived. The authors of these dictionaries generally rely upon P. Smith, and it is to be regretted that such names as for instance *Corchorus pyriformis*, *Cucumis longa*, given by him as scientific denominations, but unintelligible to botanists, have found their way from his Chinese Materia medica even into Dr. Williams' valuable dictionary (p. 861, 466). The latter gives generally, as far as Chinese Botany is concerned, the best information obtainable.

I should not close these remarks without cautioning the student of Chinese Botany against a French essay towards identifying Chinese names of plants, which was published ten years ago, and is the worst of its kind we have had the misfortune to notice. It is from the untrustworthy pen of P. Perny, and appeared as an appendix to his *Dictionnaire Français-Latin-Chinois*, 1872, a pretentious work beautifully printed, but which, I am sorry to say, puts sinologues to blush. As to the botanical part, the author says (General Preface and Preface to the Appendix on Natural History): "La synonymie que nous donnons ici est probablement la plus complète qui ait parue jusqu'à ce jour" (he should have added "et la plus erronée"). Indeed Perny identifies 2375 names of Chinese plants. He reproduces occasionally previously-made identifications (Hoffmann and Schultes, Williams), but the bulk of the "synonymie" is peculiar to the author's "researches." We may ask how he succeeded in bringing together such a mass of erroneous notions on the most common and generally known subjects, for it is not too much to say that it is difficult to meet with one correct statement in this essay. Even a student of Chinese unacquainted with Chinese Botany knows that 穀子 *ku tsz'* is not *Rice*, as Perny asserts (1993), but *Millet* (*Setaria italica*); that 小麥 *siao mai* is not *Rye* (2136), but *Wheat*; that 柏 *po* is not *Stillingia sebifera* (2201), but *Thuja*, or sometimes the *Cypress*; that 白楊 *po yang* is not the *Cypress* (852), but the *Poplar*; and that the *Water-melon* is not 絲瓜 *sz' kua* (which is a *Luffa*), and also not 西瓜 (1744), but 西瓜 *si kua*.

CHAPTER III.

ALPHABETICAL LIST OF CHINESE WORKS AND
AUTHORS.

Having given in a previous chapter a sketch of the principal Chinese treatises on *Materia medica*, Botany, Agriculture, etc., I now venture to offer a more complete enumeration, not only of such Chinese works as relate to that branch of literature, but of many other writings on Medicine, History, Geography, Philosophy, etc., which are frequently quoted in the *Pen ts'ao kang mu* and other works of the same class.

Attention has already been drawn in a previous chapter to the great difficulty which a student of Chinese botanical writings has to contend with in ascertaining the time when the numerous works quoted in these writings were composed. We have to seek information about them in numerous Chinese bibliographical works not always readily accessible. It is therefore not surprising that European sinologues, in translating Chinese botanical articles, generally confine themselves to the expression "a Chinese author says," without attempting to give the date of the publications they quote. Even in the translations made from Chinese works on Natural History and Agriculture by the great sinologue Stan. Julien (see for instance his "Culture des Muriers en Chine") we seldom find any indication of time with respect to the quotations he translates.

I have endeavoured to elucidate this question as far as possible, and to ascertain from various sources the time to which the authors and works quoted in the *Pen ts'ao kang mu* belong. My list will also be found to contain many other titles of Chinese works mentioned in the *Kuang hün fang pu*, the *Chi ru ming shi t'u k'ao*, the *T'u shu tsi ch'eng*, etc. It is hoped that it will afford some assistance to those who wish to study Chinese books on Natural History, and that it will prepare the reader for the better comprehension and appreciation of these writings.

Li Shi chen, the author of the *Pen ts'ao kang mu*, assumes on the part of his readers a most extensive knowledge of Chinese

literature, as in quoting works and authors he never deems it necessary to give the full title, or the full names, of the authors whose patronymic appellation he frequently omits, giving only the cognomen. Thus, for instance, by 從正 he means 張從正 *Chang Ts'ung cheng* (an author of the Kin dynasty); by 機 he means 汪機 *Wang Ki* (Ming dynasty). It is known that every author, besides his patronymic (姓) and his cognomen (名), possesses also a literary appellation (字) and one or more pseudonyms (號). By all these names he is promiscuously designated, and their identity can only be proved by referring to his biography. Sometimes the name of an author is ambiguous. 大明 *Ta Ming* is an author's name as well as that of the Great Ming dynasty. 唐 *T'ang* and 宋 *Sung* are patronymic denominations as well as names applied to Chinese dynasties. Thus the authors' names 唐慎微 *T'ang Shen wei* and 宋王微 *Sung Wang wei* may either refer to *Shen wei*, an author of the T'ang dynasty, or to *Wang wei*, an author of the Sung.—There were two Sung dynasties in China; one in the 5th century, the other from the 10th to the 13th century. There was also a state called Sung in China 500 or 600 years B. C. The Chinese, when indicating the time of an author, are accustomed to give the name of the dynasty, but in the case of the character Sung we are often left in doubt what time is meant.—It sometimes occurs also that authors of different dates bear the same name. There was a celebrated author 周密 *Chou Mi* in the 13th century. Authors of the same name wrote in the 4th and 10th centuries. 張華 *Chang Hua* was an author of the 3rd century. We find the same name among the authors of the Sung.

Before giving the results of my researches into Chinese literature, I may be allowed to notice briefly the general works from which information has been derived in order to ascertain the date of publication and other particulars regarding works and authors frequently quoted in Chinese writings on Natural History and Medicine.

Li Shi chen, in the first chapter of his *Pen ts'ao kang mu*, puts at the head of his work a list of nearly 1000 works and authors from which he made extracts for the compilation of his *Materia*

medica. They are enumerated under three heads and several subdivisions, viz.:

I. History of Chinese Materia medica. Review of 42 Chinese standard works of this class (already dealt with in the first chapter of these notes).

II. Medical Treatises.

a. Titles of 84 works quoted in the ancient Pen ts'ao (or Treatises on Materia medica) previous to Li Shi chen.

b. Additional list of 276 works first quoted by Li Shi chen.

III. Classical, historical, geographical, philosophical and other works.

a. Titles of 150 works quoted in the ancient Pen ts'ao.

b. Additional list of 440 works first quoted by Li Shi chen.

Under the second and third heads are comprised dry lists, arranged in no intelligible order, without any indication of period, giving nothing but the name of the author together with the title of the book. Sometimes the author's name is omitted. As there is no break between the name of the author and that of the work, it is in many cases difficult, even for a Chinese scholar, to separate them, or to decide whether the name of a book or an author is meant. There is no doubt that a large number of the works quoted in the Pen ts'ao kang mu were already lost when it was compiled, and that Li Shi chen's quotations were merely taken from previous works on Materia medica, especially, as he himself intimates, from the Pen ts'ao compiled in the 12th century by T'ang Shen wei. (See above Hist. Chin. Mat. med. No. 26.)

As regards the sources of my information on Chinese Bibliography, I would in the first place mention A. Wylie's admirable *Notes on Chinese Literature*, which without doubt occupies one of the most prominent places among European scientific publications on China. It is a matter of regret that the eminent author has generally confined himself in his investigations to such works as he knew from actual examination. Thus the greater part of the works and authors met with in the Pen ts'ao do not appear in Wylie's book. Besides this some biographical notices referring to Chinese authors have occasionally been derived from the late W. F. Meyers' well-known *Chinese Reader's Manual*. But for the bulk of Chinese

authors and works appearing in the subsequent list, information has been drawn from Chinese bibliographical works, catalogues, collections of reprints, etc.

In the first place I consulted the 四庫全書總目 *Sz' k'u ts'üan shu tsung mu* (abbrev. S. K.), the great descriptive catalogue of the Imperial library, in 200 books, completed in 1790; and the abridgment of it, the 四庫全書簡明目錄 *Sz' k'u ts'üan shu kien ming mu lu* (abbrev. S. K. K.), in 20 books. I quote the latter, which is more accessible, in preference, and refer to the larger catalogue only for the works omitted in the abridged edition.—There is yet another abridgment of the larger catalogue, published at the same time, with the title 四庫全書目略 *Sz' k'u ts'üan shu mu lio*. It gives only the titles, the authors' names, and the date of publication of the works, but enumerates all works found in the large catalogue.

The well-known Encyclopædia 文獻通考 *Wen hien t'ung k'ao* (abbrev. W. H.), compiled in the beginning of the 14th century by *Ma Tuan lin*, contains 75 books (174—249), dealing with Bibliography, 經籍 *king tsi*. It furnishes interesting details on many ancient Chinese works now lost.

A supplement to it was published in 1586 under the title *Sü* (續) *Wen hien t'ung k'ao*. It includes 16 chapters (172—188) on Bibliography.

Some of the Dynastic Histories give in a separate section on Bibliography lists of works existing during the respective dynasties, but generally without explanatory details or indication of date of publication.

The earliest catalogue of this kind is found in the 前漢書 *Ts'ien Han shu*, or History of the Former Han, book 30 藝文志 *i wen chi* (abbrev. HAN LIT.). It refers to the close of the first century B. C.

The next bibliographical compilation is found in the 隋書 *Sui shu*, History of the Sui (A. D. 589—618), books 32—35, 經籍. It enumerates the works published during this and the preceding dynasties (abbrev. SUI LIT.).

The 唐書 *T'ang shu*, or History of the T'ang (A. D. 618—907). There are several works of this name, the *Kiu* (old), and the *Sin* (new) T'ang shu, dating from the 9th and 11th centuries. I

always refer to the 唐書合鈔 *T'ang shu ho ch'ao*, a combination of both, published in 1733. The section on literature, *king tsi*, is comprised in books 72—75 (abbrev. T'ANG LIT.).

The 宋史 *Sung shi*, or History of the Sung (A. D. 960—1280). Section on literature, *i wen*, books 202-209). (Abbrev. SUNG LIT.).

The 明史 *Ming shi*, or History of the Ming (A. D. 1368—1644). Section on literature, *i wen*, books 96—99. (Abbrev. MING LIT.).

The Great Encyclopædia 太平御覽 *T'ai p'ing yü lan*, in 1000 books, published in 983, gives at the beginning a list of 1690 works from which quotations have been borrowed; but the time of publication is not indicated, nor are the titles arranged chronologically. (Abbrev. T. P.)

There is another Encyclopædia, 事言要元 *Shi yen yao yüan*, published in 1618, in which a very interesting bibliographical compilation is found. Between 2000 and 3000 works are noticed there. The list is chronologically arranged according to the dynastic periods. The names of the authors and occasionally other particulars are given. This list has been of great assistance to me in my investigations. (Abbrev. S. Y.)

Many of the minor treatises and articles quoted in the Pen ts'ao kang mu are found in the numerous 叢書 *Ts'ung shu*, or Collections of Reprints. A catalogue of a part of these repositories was drawn up in 1799 with the title 彙刻書目合編 *Hui k'o shu mu ho pien*, in 10 books, enumerating all the reprinted treatises contained in each ts'ung shu. Sometimes the author's name and date of publication are given, but generally we find only the dry titles of the treatises. (Abbrev. H. K.)

Much important bibliographical information has been drawn from the following four ts'ung shu:

The 漢魏叢書 *Han Wei ts'ung shu*, a collection of works written during the Han, Wei, Tsin, Liang, and Sui dynasties. The last edition reproduces nearly a hundred ancient literary works. See Wylie l. c. p. 209. (Abbrev. H. W.)

The 五百家小說 *Wu po kia siao shuo*, published during the Ming dynasty and reproducing 480 minor treatises by authors of the Han, Tsin, Liang, Wei, T'ang, Sung, and Ming dynasties. 48 books. (Abbrev. W. P.)

The 昭代叢書 *Chao tai ts'ung shu*. The first edition was published in 1697; the last much enlarged edition which I have consulted bears the date of 1834. It contains 560 more or less comprehensive articles by authors of the present dynasty. (Abbrev. C. T.)

The 函海 *Han hai*, a collection of literary productions of various times, 160 in all, published in 1783. See H. K. V. 56. (Abbrev. H. H.)

With respect to medical authors and treatises some information, not found elsewhere, has been derived from the 東醫寶鑑 *Tung i pao kien*, a general work on Medicine of Korean origin, already mentioned. The author places at the head of his work some short bibliographical notices. (Abbrev. T. I.)

To determine the time of the authors I also consulted several Chinese biographical dictionaries, especially the 尚友錄 *Shang yu lu*,—see Mayers' Chin. Read. Man. Pref. XVII. (abbrev. SH. Y.)—and the 史姓韻編 *Shi sing yün pien* (abbrev. SH. S.), published in 1784, in 64 books, a phonetically arranged list of the names of all persons whose biographies are found in the 24 histories, giving also the patronymics and surnames, literary appellations, etc.

Besides the abbreviations already given the following have been introduced into the subsequent bibliographical notes.

P. = *Pen ts'ao kang mu* (see p. 54). The figure indicates the page of the first book of the *Pen ts'ao* where the title of the respective work is found.

P. MAT. MED. = list of works on *Materia medica* in the same *Pen ts'ao*.

K. = *Kuang K'ün fang p'u* (see p. 70).

T. = *T'u shu tsi ch'eng* (see p. 71).

CH. = *Chi wu ming shi t'u k'ao* (see p. 72).

These are the sources from which the short bibliographical details furnished in the subsequent list of Chinese works and authors have been derived. The general works quoted above necessarily form the basis of all future investigation into Chinese literature and bibliography; but, as is generally the case with

Chinese books, reference to them is not easy. The reader will hardly imagine the trouble involved in bringing together the fragmentary information presented in the following pages. The bibliographical notices given there have no claim to completeness. The author's sole aim in compiling these notes was to ascertain the time when the works quoted in the Pen ts'ao kang mu and other Chinese books on Natural History, Materia medica and Medicine were published, without entering into details regarding the subjects dealt with in these treatises. It is generally impossible to say, from the mere title of a Chinese book, to what branch of literature it belongs; and even after an examination of the work itself it is often difficult to indicate in a few words its contents. This is especially the case with the writings classed in Chinese catalogues among the 雜家 and the 小說家 (miscellaneous writings and essayists in Wylie's Notes on Chin. literature), and frequently quoted in the Pen ts'ao. In many cases merely the title of the work and the date of publication are given in the following list. The authors are generally quoted only if their names appear in the quotations of the Pen ts'ao. The reader who would desire more information about these works and their authors is referred to the general works on Chinese literature which are invariably quoted.

Although I have apparently exhausted all the Chinese sources of information regarding Chinese literature obtainable in our days, I have not been able to ascertain the date of publication of all the treatises appearing in the list of the Pen ts'ao. As there are many misprints and inaccuracies in the editions of this work now extant, the titles and authors' names are occasionally misspelt. Some errors of this kind have been corrected; others may have escaped my attention. On the other hand, Li Shi chen, in quoting authors or works in his Materia medica, frequently abbreviates the title, or gives the author's pseudonym instead of his true name appearing in the list. I may be allowed to quote a few instances.

The treatise 飲膳正要 *Yin shan cheng yao* of the P. list med. 16 (No. 1096 of my list) is generally quoted in the text as 正要.

P. list 26 we read 沈括夢溪筆談 *Ch'en Kua's Meng k'i pi t'an* (see my list No. 510); but in the text of the Pen ts'ao the

title of the same work often reads 沈存中筆談 (the literary name of the author was 存中).

Thus again the work 王梅溪集 (P. list 39; my list No. 1015), writings of *Wang Mei k'i*, is identical with the 王龜齡集, quoted P. XIV. (sub *mo li hua*). The same author is also styled 王十朋.

The Pen ts'ao list of medical works gives the titles of a host of collections of medical prescriptions (方), and alchemical receipts of various periods. The origin of many of these I have not been able to ascertain. But I think that no important Chinese treatise quoted in the Pen ts'ao has been omitted in my list, where the reader who in future may investigate the History of Chinese Medicine (a field of inquiry still untrodden by European scholars), will also find a considerable amount of information on the subject.

1. 艾葉傳 *Ai ye ch'uan*. A treatise on the *Artemisia* leaf (used as moxa), by *Li Yen wen* (see No. 258). Ming dyn.—P. med. 16.

2. *An hui t'ung chi*. See p. 89.

3. 安南志畧 *An nan chi lio*. An account of Annam, by 黎崱 *Li Tse*, a native of that country. Close of the 13th cent.—Wylie 33.

4. 茶經 *Ch'a king*. A treatise on the Tea plant, by 陸羽 *Lu Yü*. Middle of the 8th cent.—P. 26.—Wylie 119.—Reprinted in the Ch. descript. part XXI. 36.

5. 茶錄 *Ch'a lu*. An account of the Tea plant, by *Ts'ai Siang* (see No. 428).—S. K. K. XII. 21.

6. 茶譜 *Ch'a pu*. A treatise on Tea, by 毛文錫 *Mao Wen si*. Sung dyn.—P. 28.—W. H. CCXVIII. 8, where the author is styled 燕文錫 *Yen Wen si*, a native of Shu (the present Sz' ch'uan).

7. A work with the same title, by 顧元卿 *Kü Yüan k'ing* of the Ming dyn. is mentioned in the H. K. III. 60.

8. 茶對 *Ch'a tui*. A work on Tea, by 蔡宗顏 *Ts'ai Tsung yen*. Sung dyn.—P. 28.—W. H. CCXVIII. 10.

9. 茶董補 *Ch'a tung pu*. Selection of extracts from ancient authors regarding Tea, by 陳繼 *Ch'en Ai*. First half of the 17th cent.—Wylie 119.

10. 戰國策 *Chan kuo ts'e*. Story of the Contending States, 481—221 B. C. Author unknown. First commented upon by 高誘 *Kao Yu* of the Han dyn.—P. 23.—Han lit.—Wylie 25.
11. 產乳集驗方 *Ch'an ju tsi yen fang*. Medical prescriptions, by 楊歸厚 *Yang Kui hou*.—P. med. 15.—T'ang lit.
12. 產寶 *Ch'an pao*, by 咎殷 *Tsan Yin*. T'ang dyn.—P. med. 15.—W. H. CCII. 14.
13. 張協賦 *Chang Hie fu*. Madrigal of *Chang Hie* (?), who lived during the Tsin period.—P. 27.—Tsin shu 55.—Sui lit.
14. 張籍詩集 *Chang Tsi shi tsi*. Poetical works and memoirs of *Chang Tsi* of the T'ang dyn.—P. 38.—S. K. K. XV. 15.
15. 張東海集 *Chang Tung hai tsi*. Collection of the writings of 張汝弼 *Chang Ju pi* of the Ming dyn.—P. 39.—S. Y.
16. 張宛邱集 *Chang Yüan k'iu tsi*, by 張耒 *Chang Lei*. Sung dyn.—P. 39.—S. K. K. XV. 40.
17. 長慶集 *Ch'ang k'ing tsi*, by the famous poet 白居易 *Po Kü i*, A. D. 772—846. His liter. name was 樂天 *Lo t'ien*.—P. 39.—W. H.—Mayers 546.
- There is a work with the same title by 元稹 *Yüan Cheng*, A. D. 779—831.—P. 39.—S. K. K. XV. 18.—Mayers 961.
18. 長青山記 *Ch'ang ts'ing shan ki*. Record of the mountain *Ch'ang ts'ing* (in Kiang nan), by 羅逸 *Lo I* of the Ming dyn.—Reproduced in the *Yü ming shan ki*.
19. 長物志 *Ch'ang nu chi*. Ming dyn.—S. K. K. XIII. 31.
20. 菖蒲傳 *Ch'ang p'u ch'uan*, written also 昌陽傳 *Ch'ang yang ch'uan*. A Taoist tale by an unknown author, referring to the *ch'ang p'u* plant (*Acorus*).—Sung dyn.?—P. med. 16.—Reprinted in the T. LXVIII.
21. 暢異物志 *Ch'ang i nu chi*, by 陳祈 *Ch'en K'i*.—P. 30.—T'ang lit.
22. *Chao tai ts'ung shu*. See p. 136.
23. 朝野僉載 *Ch'ao ye ts'ien tsai*, by 張鷟 *Chang Sho* of the 8th cent.—P. 26.—Wylie 152.—Reprinted in the W. P.
24. *Che kiang t'ung chi*. See p. 90.

25. 冊府元龜 *Ch'e fu yüan kui*. Encyclopædia. Commencement of the 11th cent.—P. 31.—Wylie 147.

26. 真誥 *Chen kao*. A Taoist work, by *T'ao Hung king* (see p. 42).—P. 36.—Wylie 175.

27. 真臘風土記 *Chen la feng t'u ki*. A description of Cambodia, by 周達觀 *Chou Ta kuan*, a follower in the suite of an envoy from China to that country in the years A. D. 1295—97.—P. 30.—Wylie 47.

This has been translated into French by A. Rémusat (*Nouv. Mél. asiat.* I. 134).

28. 珍珠船 *Chen chu ch'uan*, by 陳繼儒 *Ch'en Ki ju*. Ming dyn.—T. CLXXXI. Frequently quoted.—S. K. CXXXII. 26.

29. *Chen chu nang*. See p. 48.

30. 甄異傳 *Chen i ch'uan*, by 戴祚 *Tai Tsu* of the Tsin dyn.—P. 34.—Sui lit.

31. 枕中記 *Chen chung ki*, a Taoist work by *Sun Sz' mo* (see p. 43). Commencement of the 7th cent.—P. med. 13.

There are several works bearing the same title. The P. med. 15 quotes one written by 葉天師 *Ye t'ien shi* (not identified).—The W. H. CCXVII. 12 mentions a work *Chen chung ki*, author unknown, Sung dyn.

32. 針經 *Chen king*. A treatise on Acupuncture by *Huang fu Mi* (see No. 271).

33. 陳留耆舊傳 *Ch'en liu k'i kiu ch'uan*. Han period.—Sui lit. Frequently quoted in the K. and in the T.—*Ch'en liu* is an ancient name for the present K'ai fung fu. See also No. 246.

34. 陳子昂集 *Ch'en Tsz' ang tsi*. Collection of the writings of *Ch'en Tsz' ang* of the T'ang dyn.—P. 27.—W. H. CCXXXI. 5.

35. 沈氏農書 *Ch'en shi nung shu*. A work on Agriculture, originally compiled by an author whose surname was *Ch'en*, but published in the 17th cent. by 張履祥 *Chang Li siang*.—S. K. CII. 16.—Reprinted in the C. T.

35a. 岑參詩集 *Ch'en Shen shi tsi*. Poems of *Ch'en Shen*. T'ang dyn.—P. 38.—S. Y.

36. 證治準繩 *Cheng chi chun sheng*. A collection of medical treatises. A. D. 1537.—Wylie 81.

37. 證治要訣 *Cheng chi yao küe*, by 戴元禮 *Tai Yüan li*. Yüan dyn.—P. med. 18.—Tung i pao kien 7.
38. *Cheng lei pen ts'ao*. See p. 47.
39. *Cheng shu*. See No. 1130.
40. *Cheng yao*. See No. 1096.
41. 誠齋集 *Ch'eng chai tsi*, by 楊萬里 *Yang Wan li*. Sung dyn.—P. 39.—S. K. K. XVI. 25.
42. 澄懷錄 *Ch'eng huai lu*, by *Chou Mi* (see No. 48). Yüan dyn.—S. K. CXXXI. 5.
43. 程氏遺書 *Ch'eng shi I shu*. Sung dyn.—P. 34.—W. H. CCX. 4.
44. *Ch'eng te fu chi*. See p. 88.
45. 直省志書 *Chi sheng chi shu*. Frequently quoted in the K. and in the T.—It is a topography of the districts of the Chinese empire. Ming, or perhaps commencement of the present dyn.
46. *Chi wu ming shi t'u k'ao*. See p. 72.
47. 志怪 *Chi kuai*, by 祖台之 *Tsu Tai chi* of the Tsin dyn. See his biography, Tsin shu 75.—P. 34.—Sui lit.
- There are several works with the same title, but by authors of different times, Sung dyn. (S. Y.), Ming dyn. (S. K. CXLIV. 10), T. P.
48. 志雅堂雜鈔 *Chi ya t'ang tsa ch'ao*, by 周密 *Chou Mi*. Latter half of the 13th cent. and beginning of the 14th.—P. 31.—S. K. CXXVII. 9.
49. 指南方 *Chi nan fang*. Medical prescriptions, by 史堪 *Shi K'an*. Sung dyn.—P. med. 20.—W. H. CCXXIII. 9.
50. *Chi wen shuo*. See No. 152.
51. 止齋集 *Chi chai tsi*, by 陳傅良 *Ch'en Fu liang*. Sung dyn.—P. 39.—S. K. K. XVI. 19.
52. 枝山前聞 *Chi shan ts'ien wen*. Ming dyn.—Reprinted in the W. P.
53. 紙譜 *Chi pu*. A treatise on Paper, by 蘇易簡 *Su I kien*. Close of the 10th cent.—P. 29.—S. K. K. XII. 18.
54. 質龜論 *Chi kui lun*, by *Chang Shi nan* (see No. 1100). Sung dyn.—P. 28.
55. 摭異記 *Chi i ki*. T'ang dyn.—Reprinted in the W. P.

56. 炙穀子 *Chi ku tsz'*, by 王叡 *Wang Jui*. T'ang dyn.—P. 35.—S. Y. (T'ang authors).

57. 卓異記 *Cho i ki*. Record of matters relating to the T'ang dyn., by 陳翽 *Ch'en Ao* of the T'ang. Others give 李翽 *Li Ao* as the name of the author.—P. 34.—S. K. K. VI. 13.—Reprinted in the W. P.

58. 輟耕錄 *Cho keng lu*. Interesting miscellanies relating to the Mongol dynasty, published in 1366 by *T'ao Kiu ch'eng* (see No. 762).—P. 32.—Wylie 159.—Mayers 712.

59. 周易通卦驗 *Chou i t'ung kua yen*. Researches into the symbols of the I king (classic).—P. 33.—Mentioned in the T. P. list (10th cent.).

60. *Chou li*. See p. 33.

61. 周必大集 *Chou Pi ta tsi*. Collection of the writings of Chou Pi ta, a celebrated scholar and functionary. A. D. 1126—1204.—P. 39.—Mayers 69.

62. 周顛仙傳 *Chou Tien sien ch'uan*. Biography of a miraculous individual, who lived on the *Lü shan* at the close of the 14th cent. (see appendix 30). Written by the Ming Emperor *Hung wu* and engraved on a stone monument on that mountain.—P. 37.—S. K. CXLVII. 38.

63. 肘後百一方 *Chou hou po i fang*. Medical prescriptions, by *Ko Hung* (see above note 12 [8]).—P. med. 14.—Tung i pao kien 4.

A work with the same title was published by *T'ao Hung king* (see p. 42).—T. XXI.

64. 仇池筆記 *Ch'ou ch'i pi ki*, by *Su Shi* (see No. 991).—P. 32.—S. K. K. XIII. 17.

65. 竹坡詩話 *Chu p'o shi hua*, by 周紫芝 *Chou Tsz' chi*, a poet of the 12th cent.—Sh. Y.

66. 竹譜 *Chu pu*. Treatise on the Bamboo, by 戴凱之 *Tai K'ai chi* of the Tsin dyn.—P. 29.—Quoted in the *Ts'i min yao shu* (q. v.).—S. K. K. XII. 24.—Reproduced in the H. W. and in the T. CLXXXVI.

67. A work with the same title by a Buddhist priest 贊寧 *Tsan ning*, who also wrote a treatise on Bamboo sprouts. End of the 10th cent.—P. 29.—Reprinted in the T. CLXXXVII.

68. A work with the same title by 李衍 *Li K'an*, published A. D. 1299.—Wylie 109.—S. K. K. XII. 7.

69. A work with the same title by 陳鼎 *Ch'en Ting* of the present dyn.

70. 竹書紀年 *Chu shu ki nien*, termed also 汲塚竹書 *Ki chung chu shu*. Annals of the Bamboo books, which are said to have been found in the tomb of one of the Wei princes, A. D. 284. They begin with the reign of Huang Ti and extend to B. C. 299. Translated in Dr. Legge's *Shu king*.—Some plants are occasionally mentioned in this ancient work.—P. 29.—Wylie 19.

71. 諸證辨疑 *Chu cheng pien i*, by *Wu K'iu* (see No. 215).—P. med. 18.

72. 諸番雜誌 *Chu fan tsa chi*. An account of foreign countries, by 趙汝适 *Chuo Ju huo*. Sung dyn.—S. K. K. VII. 28.

72a. *Chu kia pen ts'ao*. See p. 46.

73. 諸葛恪別傳 *Chu ko k'o pie ch'uan*. Narrative regarding *Chu ko k'o* of the kingdom of Wu (period of the three kingdoms).—Sui lit.—San kuo chi 64.

74. 朱子離騷辯證 *Chu tsz' Li Sao pien cheng*. Commentary on the Elegies of Ts'u (see No. 958), by *Chu Hi* (see No. 75).—P. 36.—W. H. CCXXX. 9.

75. 朱子大全 *Chu tsz' ta ts'üan*. Collection of the writings of the celebrated philosopher 朱熹 *Chu Hi*. A. D. 1130—1200.—P. 34.—Mayers 79.

76. 初學記 *Ch'u hio ki*, compiled by 徐堅 *Sü Kien*. Early part of the 8th cent.—P. 32.—S. K. K. XIV. 2.

77. 楮記室 *Ch'u ki shi*, by 潘損 *P'an Hüan*. Ming dyn.—P. 37.—S. K. CXXXVIII. 6.

78. 樗繭譜 *Ch'u kien pu*. A treatise on wild silk (produced on Oaks, Ailantus, and other trees). Present dyn.—Reprinted in the Ch. descr. part XXII. 72.—See my article on Chinese silk-worm trees, p. 6.

79. 傳家秘寶方 *Ch'uan kia pi pao fang*. Medical prescriptions, by 孫用和 *Sun Yung ho*, a celebrated physician of the 11th cent.—P. med. 17.—W. H. CCXXIII. 3.

80. 傳信方 *Ch'uan sin fang*. Medical prescriptions by 劉禹錫 *Liu Yü-si*. A. D. 772—842.—P. med. 13.—Mayers 423.

81. 傳信適用方 *Ch'uan sin shih yung fang*. Medical prescriptions, by 吳彥葵 *Wu Yen k'ui*. Sung dyn.—P. med. 20.—S. K. K. X. 10.

82. 船窓夜話 *Ch'uan ch'uang ye hua*, by 顧文薦 *Ku Wen yen*. Sung dyn.—Reprinted in the W. P.

83. 莊子 *Chuang tsz'*, a work on Taoist philosophy, by 莊周 *Chuang Chou*. 4th cent. B. C. A commentary on it was written by 郭象 *Kuo Siang* in the 4th cent. of our era.—P. 23.—Wylie 174.

84. 妝樓記 *Chuang lou ki*. T'ang dyn.—Reprinted in the W. P.

85. 春渚紀聞 *Ch'un chu ki wen*, by 何遠 *Ho Yüan*. Sung dyn.—P. 38.—H. K. II. 8.—Reprinted in the W. P.

86. 春秋繁露 *Ch'un ts'iu fan lu*. Additions to the Spring and Autumn Annals, by 董仲舒 *Tung Chung shu*. B.C. 156-86.—Wylie 129.—Reprinted in the H. W.

87. 春秋考異郵 *Ch'un ts'iu k'ao i yu*.—P. 33.—This work seems to date from the period of the Former Han.

88. 春秋題辭 *Chun ts'iu t'i ts'z'*. This is a section of the *Ch'un ts'iu wei shu* (see No. 90).—P. 33.

89. 春秋左傳注疏 *Ch'un ts'iu Tso ch'uan chu shu*. The Spring and Autumn Annals and the Tso narrative (Classics), commented upon by 杜預 *Tu Yü*. A. D. 222—284.—P. 23.—Wylie 5.—Mayers 684.

90. 春秋緯書 *Ch'un ts'iu wei shu*. Investigations of the Spring and Autumn Annals, written in the first cent. B. C.—S. Y. (works of the Ts'ien Han period). Frequently quoted in the T. with respect to plants.

91. 春秋元命苞 *Ch'un ts'iu yüan ming pao*. A section of the preceding.—P. 33.

92. 春秋運斗樞 *Ch'un ts'iu yün tou ch'u*. A section of No. 90.—P. 33.

93. *Chung chi shu*. See p. 76.

94. 種蘭訣 *Chung lan küe*. Directions for the cultivation of the *lan* flower (*Cymbidium* and other orchid. plants), by 李奎 *Li K'ui*. Present dyn.—Wylie 121.

95. 種樹書 *Chung shu shu*. A work on the art of planting trees, by 俞宗本 *Yü Tsung pen*. Ming dyn.—P. 34.—H. K. II. 36.
About a work with the same title, dating from the T'ang period, see p. 79.
96. 種芋法 *Chung yü fa*. On the cultivation of the *yü* plant (*Caladium esculentum*), by *Huang Sheng ts'eng* (see No. 249). Reprinted in the T. LIII.
97. *Chung hua ku kin chu*. See No. 355.
98. *Chung nan chi*. See No. 542.
99. 中藏經 *Chung ts'ang king*. A medical treatise (on the viscera?), by *Hua T'o* (see note 12 [6]). 3rd cent.—P. med. 13.
100. 中吳紀聞 *Chung wu ki wen*, by 龔明之 *Kung Ming chi*. Sung dyn.—S. K. K. VII. 24.
101. 法華經 *Fa hua king*. Chinese translation of the Lotus of the Good Law Sutras, made about A. D. 300 by a foreign priest.—P. 37.—Dr. Edkins' *Chin. Buddhism*, p. 108.
102. *Fan i ming i*. See p. 94.
103. 番禺雜記 *Fan yü tsa ki*. Miscellaneous records regarding *Fan yü* (a district in *Kuang chou fu*), by 鄭熊 *Cheng Hiung*. T'ang dyn.—W. H. CCV. 12.—S. Y.
The P. 25 quotes a work with the same title by an author with the surname 王 *Wang*. This seems to belong to an earlier period.
104. 范子計然 *Fan tsz' ki jan*, by 范蠡 *Fan Li*, in the 5th cent. B. C.—P. 27.—W. H. CCXIII. 1.—Mayers 127.
105. 方虛谷集 *Fang Hü ku tsi*. Collection of the writings of 方回 *Fang Hui* (liter. name *Hü ku*). Sung dyn.—P. 39.—H. K. III. 49.—W. P.
106. 方言 *Fang yen*. A comparative vocabulary of synonyms used in various districts, ascribed to 楊雄 *Yang Hiung*. B. C. 53—A. D. 18. He held office as 執戟 *chi ki* under the Emperor Cheng Ti, and is therefore sometimes styled *Yang chi ki*. He is also quoted under the name of 楊子 *Yang tsz'*.—P. 28.—Han lit.—S. K. K. IV. 16.—Mayers 883.—The *Fang yen* is reprinted in the H. W.
107. 方輿勝覽 *Fang yü sheng lan*, sometimes also written 方輿志 *Fang yü chi*. A geographical work by *Chu Mu* (see No. 721). Middle of the 13th cent.—P. 29.—S. K. K. VII. 2.

108. 放蠟法 *Fang la fa*. A treatise on the rearing of the wax insect and on the production of white insect wax. Present dyn.—Reprinted in the Ch. descr. part XIX. 60.
109. 放翁集 *Fang weng tsi*, by 陸游 *Lu Yu*. Sung dyn.—P. 39.—S. K. CXCVIII. 47.
110. 飛鴻亭集 *Fei Hung t'ing tsi*, by 吳鵬 *Wu P'eng*. Ming dyn.—P. 23.—S. K. CLXXVII. 7.
111. 霏雪錄 *Fei süe lu*, by 劉績 *Liu Tsi* (liter. name 孟熙 *Meng hi*). Ming dyn.—P. 33.—S. K. K. XIII. 27.
112. 風俗通 *Feng su t'ung*. A collection of miscellaneous notices of ancient matters, by 應劭 *Ying Shao*. 2nd cent. A. D.—P. 32.—Wylie 131.—Reprinted in the H. W.
113. 風土記 *Feng t'u ki*, by 周處 *Chou Ch'u* of the 'Tsin dyn.—P. 32.—Sui lit.—Tsin shu 58, biography.
114. *Feng ts'in yang lao shu*. See No. 741.
115. 蜂記 *Feng ki*, by *Wang Yüan chi* (see No. 1018).
- 115a. 浮槎山水記 *Fou ch'a shan shui ki* (see Appendix 5), by *Ou yang Siu* (see No. 867). Reprinted in the Yu ming shan ki (No. 1101a).
116. 婦人方 *Fu jen fang*. Medical prescriptions against female complaints, by 郭稽中 *Kuo Ki chung*, a celebrated physician of the Sung period.—P. med. 21.—S. K. CIII. 50.
117. 婦人良方 *Fu jen liang fang*, by 陳自明 *Ch'en Tsz' ming*. About A. D. 1237.—P. med. 21.—Wylie 79.
118. 婦人良方補遺 *Fu jen liang fang pu i*, by 熊宗立 *Huang Tsung li*. Ming dyn.—P. med. 21.—Tung i pao kien 7.
119. 扶南記 *Fu nan ki*. An account of Fu nan (Cochin-china), by 朱應 *Chu Ying*. 5th cent. A. D. or earlier.—P. 25.—The Sui lit. mentions a work 扶南異物志 *Fu nan i wu chi* by the same author.—A work *Fu nan ki*, but by another author, is quoted in the T. P.
120. 符瑞記 *Fu shui ki*, by 許善心 *Hü Shan sin* of the 6th cent.—P. 33.—Sui lit.
121. 負暄錄 *Fu huan lu*, by 顧文薦 *Ku Wen tsien*. Sung dyn.—P. 36.—S. Y.

122. 服椒訣 *Fu tsiao küe*, by 吳猛 *Wu Meng*.—P. med. 16.—I am not aware whether this is the *Wu Meng* mentioned in Mayers' *Chin. Read. Man.* 868, who lived in the 4th cent.

123. 附子傳 *Fu tsz' ch'uan* is an account of the *fu tsz'* plant (Aconite) of 彭明 *Chang ming* (in Sz' ch'uan), by 楊天惠 *Yang T'ien hui*. Sung dyn.—P. med. 16.—Reprinted in the *Ch. descr.* part XIV. 16.—T. CXXVII.

124. *Fu kien t'ung chi*. See p. 90.

125. 海槎餘錄 *Hai ch'a yü lu*, by 顧玠 *Ku Kie*. Ming dyn.—P. 31.—S. K. LXXVIII. 16.

126. 海錄碎事 *Hai lu sui shi*, by 葉廷珪 *Ye Ting kui*. Sung dyn.—P. 37.—S. K. K. XIV. 4.

127. *Hai nei shi chou ki*. See No. 724.

128. 海山記 *Hai shan ki*. T'ang dyn. Author unknown.—Reprinted in the W. P.

129. 海上方 *Hai shang fang*. Medical prescriptions, by 溫隱居 *Wen Yin kü* (*Wen* the hermit), or properly 溫大明 *Wen Ta ming*. Sung dyn.—P. med. 19.—H. K. II. 36.

There is a work of the same name by *Sun Sz' mo* (see p. 43).—H. K. VI. 41.

130. 海上名方 *Hai shang ming fang*.—P. med. 20.—Sung lit.

131. 海上仙方 *Hai shang sien fang*, by *Wen Ta ming* (see No. 129).—P. med. 20.—H. K. II. 36.

132. 海上集驗方 *Hai shang tsi yen fang*. Medical prescriptions, by 崔元亮 *Ts'ui Yüan liang*. Beginning of the 9th cent.—*Biogr. T'ang shu* 216.—P. med. 14.—T'ang lit.

133. 海棠譜 *Hai t'ang pu*. A treatise on the *hai t'ang* (*Pyrus spectabilis*), by 沈立 *Ch'en Li*. Sung dyn.—*Biogr. Sung shi* 333.—P. 29.—Reprinted in the T. CCXCIX.

134. A treatise with the same title was compiled by 陳思 *Ch'en Sz'* in A. D. 1259.—Reprinted in the T. l. c.

135. *Hai wai i wu chi*. See p. 25.

136. *Hai yao pen ts'ao*. See p. 45.

137. *Han Wei ts'ung shu*. See p. 135.

138. 漢武故事 *Han Wu ku shi*. A record relating to the time of the Emperor Wu Ti, B. C. 140—86, by *Pan ku* (see No. 941).

Others believe that it was compiled during the T'ang period.—P. 24.—S. K. K. XIV. 30.

139. 漢武帝內傳 *Han Wu Ti nei ch'uan*. It records the visit of Si wang mu (the mother of the King of the West) to the Emperor Wu Ti of the Han. It is attributed to Pan ku (see No. 941), but was probably written in the 3rd cent.—P. 24.—Reprinted in the H. W.—Wylie 153.

140. 韓非子 *Han Fei tsz'*. The works of *Han Fei*, a philosopher of the 3rd cent. B. C.—Mayers 149.

141. 翰墨全書 *Han mo ts'üan shu*, by 劉應李 *Liu Ying li*. End of the 13th cent.—P. 36.—S. K. CXXXVII. 11.—S. Y. (Yüan authors).

142. 韓詩外傳 *Han shi wai ch'uan*. Anecdotes of the Shi king, by 韓嬰 *Han Ying*, who flourished between B. C. 178—156.—P. 35.—Reprinted in the H. W.—Legge's Shi king, Prol. 10.

143. 韓文公集 *Han wen kung tsi*. Collection of the writings of 韓愈 *Han Yü*, a philosopher and poet of the T'ang, d. A. D. 768—824.—P. 38.—Mayers 158.

144. 翰苑叢記 *Han yüan ts'ung ki*, by 陸贄 *Lu Ch'ang*. T'ang dyn.—P. 37.—S. K. K. XV. 13.

145. *Han hai*. See p. 136.

146. 寒食散方 *Han shi san fang*. Medical prescriptions.—P. med. 15.—Sui lit.

147. 好事集 *Hao shi tsi*. Sung dyn. (according to the T.).

148. 浩然齋日鈔 *Hao jan chai ji ch'ao*, by 周岐 *Chou Mi* (see No. 48).—P. 31.—S. K. K. XX. 8.

149. 夏小正 *Hia siao cheng*. The Calendar of the Hia dynasty, B. C. 2205—1766. It is comprised in the 'Ta Tai Li ki, or Ritual Classic revised by the senior Tai, about the beginning of our era.—P. 33.—Wylie 5.—Frequently quoted in Chinese botanical works.

150. 遐觀賦 *Hia kuan fu*, by 柯洪 *Ko Hung* (see No. 579).—P. 36.

151. 暇日記 *Hia ji ki*, by 劉跂 *Liu K'i*. Sung dyn.—P. 38.—S. Y.—Reprinted in the W. P.

152. 洽聞記 *Hia wen ki*, a geographical work. T'ang period.—W. P.

The P. 38 quotes a work 治聞說 *Chi wen shuo*. I have some reasons for believing that this is a misspelt title and that the above work is meant.

153. 香譜 *Hiang pu*. A treatise on fragrant substances, by *Ye Ting kui* (see No. 126). Sung dyn.—P. 29.—Reprinted in the Ch. descr. part XVIII. 41 and T. CCCXV.

154. A treatise with the same title by 洪芻 *Hung Ch'u*, liter. name 駒父 *Kü fu*. Sung dyn.—P. 29.—S. K. K. XII. 20.—Reprinted in the Ch. l. c. 19 and T. l. c.

155. A treatise with the same title by 陳敬 *Ch'en King*. Sung dyn.—S. K. K. XII. 20.

156. 孝經援神契 *Hiao king yüan shen k'i*. This is a section of the 孝經緯 *Hiao king wei*, an investigation of the Hiao king, or Classic on Filial Piety. Written about our era.—P. 33.—S. Y.

157. 蟹譜 *Hie pu*. A treatise on Crabs, by 傅肱 *Fu Kung*. A. F. 59.—P. 28.—Wylie 123.

158. 陷虜記 *Hien lu ki*, by 胡嶠 *Hu Kiao*. Sung dyn. This record refers to the Wu tai period.—P. 33.—Sung lit.

159. 軒轅本紀 *Hien Yüan pen ki* (*Hien Yüan* is one of the names of the Emperor Huang Ti, see p. 41), by 王瓘 *Wang Kuan*. T'ang dyn.—P. 24.—T'ang lit.

160. 行營雜記 *Hing ying tsa ki*, by 趙葵 *Chao Ts'ai*. Biography, Sung shi 417.—P. 33.

161. 學圃雜疏 *Hio pu tsa shu*, by *Wang Shi mou* (see No. 185). Ming dyn.—Ch. descr. part II. 148.

162. 河圖括地象 *Ho t'u kua ti siang*. This seems to be a production of the Han period. It is quoted in the *Po wu chi* (see No. 637).—P. 33.—Mayers 177.

163. 河圖玉版 *Ho t'u yü pan*. Seems to be likewise a production of the Han. It is quoted in the *Po wu chi*.—P. 33.—Mayers 177.

164. 河洛記 *Ho lo ki*. T'ang dyn.—W. H. CXCI. 6.

165. *Ho nan t'ung chi*. See p. 89.

166. 何仲默集 *Ho Chung mo tai*. Collection of the writings of *Ho Chung mo*. Ming dyn.—P. 39.—S. Y.

167. 何首烏傳 *Ho shou wu ch'uan*. A treatise on the medical virtues of the plant *Ho shou wu* (*Polygonum multiflorum*), by 李翱 *Li Ao*, of the 10th cent. Biogr., T'ang shu 211.—P. med. 15.—W. H. CCXVIII. 11.—Reprinted in the T. CLXXII.

168. 鷓冠子 *Ho Kuan tsz'*, a philosophical treatise of the 4th cent. B. C.—P. 34.—Han lit.—Wylie 126.

169. 鶴林玉露 *Ho lin yü lu*, by 羅大經 *Lo Ta king*. Sung dyn.—P. 31.—S. K. K. XIII. 23.

170. 後漢書 *Hou Han shu*. History of the After Han (A. D. 25—221), by 范曄 *Fan Ye*.—P. 23.—Wylie 13.

171. 後山談叢 *Hou shan t'an ts'ung*. Sung dyn.—S. K. K. XIV. 19.

172. 後魏書 *Hou Wei shu*. History of the After (Northern) Wei. A. D. 386—558.—P. 30.—Wylie 16.

173. 後燕錄 *Hou Yen lu*. Sung dyn.—T.

174. *Hu Pen ts'ao*. See p. 45.

175. *Hu kuang t'ung chi*. See p. 89.

176. *Hu nan t'ung chi*. See p. 90.

177. *Hu pei t'ung chi*. See p. 90.

178. 許真君書 *Hü chen kün shu*.—Chen kün (the Immortalized) is an epithet applied to 許遜 *Hü Sun*, one of the Taoist patriarchs who lived in the 3rd cent.—P. 36.—Mayers 203.

179. 花鏡 *Hua king*. Mirror of Flowers, a botanical work by 陳淏子 *Ch'en Hao tsz'*, published in 1688.—Wylie 120.

180. 花經 *Hua king*. An enumeration of Chinese flowers, by 張翮 *Chang I*. Sung dyn.—Reprinted in the T. X.

181. 花曆 *Hua li*. Calendar of flowers, by 程羽文 *Ch'eng Yü wen*. 17th cent.—Reprinted in the T. XI.

182. 花譜 *Hua pu*. A treatise on flowers. Sung dyn.—W. H. CCXVIII. 13.

183. A work of the same name by 檀萃 *T'an Ts'ui*, pseudonym 游默齋 *Yu mo chai*. Present dyn.—Ch. descr. part VIII. 30.—T. CXIX. 1.—C. T.

184. 花史 *Hua shi*. A treatise on Flowers, by 吳彥匡 *Wu Yen k'uang*. Ming dyn.—S. K. CXVI. 40.

185. 花疏 *Hua shu*. A treatise on Garden flowers, by 王世懋 *Wang Shi mou*, died 1591. His biogr., Ming shi 287. He was

a younger brother of *Wang Shi chen* (see No. 207), and has left many treatises on plants. The *Hua shu* is reprinted in the T. XI.

186. 花小名 *Hua siao ming*. On popular names of plants. Author *Ch'eng Yü wen* (see No. 181). 17th cent.—Reprinted in the T. XI.

187. 化書 *Hua shu*, written by 宋齊邱 *Sung Ts'i k'iu*, and completed by 譚峭 *T'an Ts'iao*. Wu tai period.—P. 27.—S. K. K. XIII. 4.—S. Y.

188. 華山記 *Hua shan ki*. Account of the Hua mountain (see Appendix 10).—P. 25.—W. H. CCVI. 1. Author unknown.

189. 華陀方 *Hua T'o fang*. Medical prescriptions of the celebrated physician *Hua T'o* (see note 12 [6]).—P. med. 13.—According to the Sui lit. these prescriptions were collected by his pupil *Wu P'u* (see p. 40).

190. 華陽國志 *Hua yang kuo chi*. Ancient records relating to Pa and Shu (the present Sz' ch'uan), by 常璩 *Ch'ang K'ü* of the Tsin dyn.—P. 31.—Reprinted in the H. W.—S. K. K. VI. 23.

191. 畫墁錄 *Hua man lu*. Sung dyn.—S. K. K. XIV. 20.

192. 淮南八公相鶴經 *Huai nan pa kung siang ho king*.—P. 28.—This work existed during the Liang period and is probably of earlier origin.—Sui lit.

193. 淮南子 *Huai nan tsz'*. A Taoist work, by 劉安 *Liu An*, prince of Huai nan, died 122 B. C.—P. 23.—Wylie 126.—Mayers 412.

194. 淮南王萬畢術 *Huai nan wang wan pi shu*, by *Liu An* (see No. 193).—P. 32.

195. 寰宇志 *Huan yü chi*, by *Lo Shi* (see p. 86). 10th cent.—S. Y.

196. 玄中記 *Hüan chung ki*, by 郭氏 *Kuo (shi)*. 5th cent. or earlier.—P. 24.—S. Y.—Quoted in the *Ts'i min yao shu* (q. v.).

197. 玄覽 *Hüan lan*, or 元覽 *Yüan lan*.—T'ang lit.

198. 玄密 *Hüan mi*, by *Wang Ping* (see No. 204). 8th cent.

199. 玄明粉方 *Hüan ming fen fang*. Medical prescriptions.—P. med. 16.—Sung lit.

200. 玄晏春秋 *Hüan Yen ch'un ts'iu*, by *Huang fu Mi* (see No. 271) of the Tsin dyn.—S. Y.

201. 黃山志 *Huang shan chi*. Description of the Huang mountain (see Appendix 12). Present dyn. Notices of plants are frequently given in it. Tea is produced on the Huang shan.—S. K. LXXVI. 24.—Wylie 50.

202. 黃山谷集 *Huang Shan ku tsi*. Collection of the writings of 黃庭堅 *Huang Ting kien*, pseudonym *Shan ku*. A. D. 1045—1105.—P. 38.—Mayers 226.

203. 黃帝書 *Huang Ti shu*. The book of the Emperor Huang Ti.—P. med. 15.—This work is mentioned in the W. H. CCXX. 14 (sub divination). It seems to be of an early date.

204. 黃帝素問 *Huang Ti Su wen*. A medical treatise attributed to the Emperor Huang Ti. It has been commented upon by 王冰 *Wang Ping*, a celebrated physician of the 8th cent.—P. med. 13.—Wylie 78.

205. 黃治論 *Huang ye lun*, by 李德裕 *Li Te yü*. A. D. 787—849.—P. 29.—Mayers 370.

206. 皇極經世 *Huang ki king shi*, by *Shao Yung* (see No. 686). Sung dyn.—P. 34.—S. K. XI. 12.

207. 彙苑詳注 *Hui yüan siang chu*, by 王世貞 *Wang Shi chen*, liter. appellation 元美 *Yüan mei*, a native of T'ai ts'ang (Kiang su). Biogr., Ming shi 287.—He lived A. D. 1529—1594, and seems to be the same who wrote the preface to the Pen ts'ao kang mu (see p. 55).—S. K. CXXXVII. 39.—S. Y.

208. 會稽典錄 *Hui ki tien lu*, a work of the Tsin period.—S. Y.

209. 揮塵錄 *Hui chu lu*, by 王明清 *Wang Ming ts'ing*. Sung dyn.—P. 35 (where the author is erroneously styled *Wang Ts'ing ming*).—S. K. K. XIV. 23.

A work of the same name is noticed in the P. 36. Author 王性之 *Wang Sing chi* (not found elsewhere).—Another work with the same title is mentioned in the S. Y. Author 楊萬里 *Yang Wan li* (see No. 41). Sung dyn.

210. 惠民和濟局方 *Hui min ho tsi kü fang*. Medical prescriptions. 10th cent.—P. med. 17.—S. K. K. X. 9.

211. 洪範五行傳 *Hung fan wu hing ch'uan*, by 劉向 *Liu Hiang*. B. C. 80—9.—P. 33.—Mayers 404.

212. 洪武正韻 *Hung Wu cheng yün*. A dictionary published during the period Hung Wu (1368—99).—P. 27.—Wylie 9.

213. 鴻烈解 *Hung lie kie*, by *Liu An* (see No. 193), second cent. B. C.—P. 23.—Wylie 126.—Reprinted in the H. W.

214. 活法機要 *Huo fa ki yao*.—P. med. 16 (without author's name).—There are two works with this title, both of the Mongol period. One of them was compiled by *Tung Yüan* (see p. 48), the other by *Chu Chen heng* (see p. 49).—H. K. VI. 30, 37.

215. 活人心統 *Huo jen sin t'ung*, by 吳球 *Wu K'iu*.—P. med. 18.—Mentioned in Ming lit.—This seems to be the author *Wu K'iu tsz'* of the Sung dyn. (see No. 556).

216. 活套 *Huo t'ao*, by *Tan K'i* (see p. 49). Yüan dyn.—P. med. 17.

217. 醫案 *I an*. A medical work by *Tan K'i* (see p. 49). Yüan dyn.—P. med. 17.

218. A work with the same title by *Pin hu* (see No. 916). Ming dyn.—P. med. 19.

219. 醫方選要 *I fang süan yao*, by 周文采 *Chou Wen ts'ai*, styled also 周良采 *Chou Liang ts'ai*. Ming dyn.—P. med. 18.—S. K. CV. 16.

220. 醫方大成 *I fang ta ch'eng*, by 孫允賢 *Sun Yün hien*. Yüan dyn.—P. med. 18.—S. K. CV. 14.

221. 醫學正傳 *I hio cheng ch'uan*, by 虞搏 *Yü T'uan*. Ming dyn.—P. med. 18.—S. K. CV. 20.

222. 醫學發明 *I hio fa ming*, by *Tung Yüan* (see p. 48). Yüan dyn.—P. med. 16.

223. 醫學綱目 *I hio kang mu*. Ming dyn.—P. med. 18.—*Tung i pao kien* 7.

224. 醫學啓源 *I hio k'i yüan*, by *Chang Kie ku* (see p. 48). Kin dyn.—P. med. 16.

225. 醫家大法 *I kia ta fa*, by *Wang Hai ts'ang* (see p. 48).—P. med. 16.—*Tung i pao kien* 6.

226. 醫鑑 *I kien*. Mirror of Medicine, by 龔信 *Kung Sin*.—P. med. 16.—*Tung i pao kien* 8.

227. 醫經小學 *I king siao hio*, by *Liu Shun* (see No. 1105). Yüan dyn.—P. med. 18.

228. 醫壘元戎 *I lei yüan jung*, by Wang Hai ts'ang (see p. 48).—P. med. 16.—Wylie 79 states that the author wrote previous to the year 1241, but according to the P. and the Tung i pao kien he lived during the Mongol period.

229. 醫林集要 *I lin tsi yao*. A medical work by 王璽 Wang Si, prefect of T'ai yüan fu, died 1488. Biogr., Ming shi 174.—P. med. 18.—Tung i pao kien 7.

230. 醫史 *I shi*. A history of Medicine, apparently by 李濂 Li Lien. Ming dyn.—P. med. 15.—S. K. CV. 19.

231. 醫說 *I shuo*, by 張杲 Chang Kao. Sung dyn.—P. med. 15.—S. K. K. X. 10.

232. *I jan fu*. See No. 409.

233. 異林 *I lin*. Ming period.—S. K. CXXVIII. 7.—There existed a work with the same title much earlier. It is noticed in the T. P. (10th cent.).

234. 異說 *I shuo*.—P. 38.—Quoted in the Po wu chi (No. 637); thus a work of the Tsin period or earlier.

235. 異聞記 *I wen ki*, by 何先 Ho Sien. Sung dyn.—P. 34.—Reprinted in the W. P.

236. 異物志 *I wu chi*, by 楊孚 Yang Fu.—P. 25.—An author Yang fu is mentioned in the Sui lit.

237. A work with the same title by 曹叔雅 Ts'ao Shu ya.—P. 30.—The same is noticed in the list of the T. P. (10th cent.), but seems to belong to an earlier period. A work *I wu chi* (without author's name) is quoted in the Ts'i min yao shu (q. v.). The S. Y. mentions two works of this name, one by 譙周 Ts'iao Chou of the period of the three kingdoms, the other by 王逸 Wang I of the Han.

238. 異魚圖贊 *I yü t'u tsan*, by Yang Shen (see No. 703).—P. 26.—S. K. K. XII. 25.

239. 異苑 *I yüan*, by 劉敬叔 Liu King shu. Liu Sung dyn. (5th cent.).—P. 24.—S. K. K. XIV. 31.

240. 易占 *I chan*. A treatise on Divination, by 京房 King Fang. First cent. B. C.—P. 33.—S. K. K. XI. 17.—Reprinted in the H. W.—Mayers 270a.

241. 易簡方 *I kien fang*. Medical prescriptions, by 王頊 Wang Shi. Sung dyn.—P. med. 17.—W. H. CCXXIII. 13.

242. 易經注疏 *I king chu shu*. The Book of Changes (one of the Classics), commented upon by 王弼 *Wang Pi* of the 3rd cent.—P. 23.—Mayers 812.

243. 易林 *I lin*. Investigations of the Book of Changes, by 焦贛 *Tsiao Kan* of the Former Han.—Reprinted in the H. W.—W. H. CCXX. 8.

244. 益州記 *I chou ki*. Records relating to I chou (Sz' ch'uan), by 任豫 *Jen Yü* of the Tsin dyn.—P. 30.—Sui lit.

245. 益部方物略記 *I pu fang wu lio ki*. This treats of the productions of the present Sz' ch'uan and contains interesting accounts of plants. The author is 宋祁 *Sung K'i*. A. D. 998—1061.—Mayers 639.—S. K. K. VII. 23.—Reprinted in the T. II.

246. 益都耆舊傳 *I tu k'i kiu ch'uan* (I tu is a district in Shan tung). Author 陳壽 *Ch'en Shou* of the Tsin dyn.—T'ang lit.

247. 逸周書 *I Chou shu*. Record of the Chou dynasty, also known under the name of 汲冢周書 *Ki chung Chou shu*. It is said to have been found in the tomb of one of the Wei princes, together with the Bamboo Annals (see No. 70).—P. 29.—Wylie 23.

248. 逸史 *I shi*, by 盧藏用 *Lu Ts'ang yung*. T'ang dyn.—P. 30.—S. Y.

249. 藝菊 *I kü*. A treatise on the cultivation of the Chrysanthemum, by 黃省曾 *Huang Sheng ts'eng*. 16th cent.—Wylie 121.—Reprinted in the Ch. descr. part VII. 4.

250. 藝文類聚 *I wen lei tsü*. A celebrated Cyclopædia, by 歐陽詢 *Ou yang Sün*. A. D. 557—645.—P. 31.—Wylie 146.

251. 夷堅志 *I kien chi*, by *Hung Mai* (see No. 1145), 12th cent.—P. 32.—S. K. K. XIV. 34.

252. 遺書 *I shu*, by 褚澄 *Ch'u Ch'eng*. End of the 5th cent.—P. med. 15.—S. K. K. X. 6.—See also No. 43.

253. 宜都山川記 *I tu shan ch'uan ki*. Description of the hills and rivers of the district of I tu (King chou fu in Hupeh).—T'ang lit.

254. 伊尹書 *I Yin shu*. The Book of I Yin, who was a minister of T'ang, the founder of the Shang dynasty. B. C. 1766.—Mayers 233.—Han lit.

255. *Je ho chi*. See p. 88.
256. 日詢手記 *Ji sün shou ki*, by 王濟 *Wang Tsi* of the Tsin dyn.—P. 37.—S. Y.
- 256a. *Ji yung pen ts'ao*. See p. 48.
257. 仁齋直指方 *Jen chai chi chi fang*, by 楊士瀛 *Yang Shi ying*. Sung dyn.—P. med. 17.—S. K. K. X. 11.
258. 人參傳 *Jen shen ch'uan*. A treatise on Ginseng, by 李言聞 *Li Yen wen*, also styled 月池 *Yüe ch'i*, a medical writer of the Ming period.—P. med. 16.—Ming lit.—K. XCV. 31.
259. 汝南先賢傳 *Ju nan sien hien ch'uan*, by 周斐 *Chou Fei* of the Tsin dyn.—Sui lit.—Reprinted in the W. P.
260. 如宜方 *Ju i fang*, by 艾元英 *Ai Yüan ying*. Yüan dyn.—P. med. 21.—S. K. CV. 13.
261. 儒醫精要 *Ju i tsing yao*, by 趙繼宗 *Chao Ki tsung*. Ming dyn.—P. med. 19.
262. 儒門事親 *Ju men shi ts'in*, by 張從正 *Chang Ts'ung cheng*, liter. name 子和 *Tsz' ho*, a celebrated physician during the Kin period (12th cent.). Biogr., Kin shi 131.—P. med. 16.—Tung i pao kien 6.—The P. generally quotes this author by his cognomen *Ts'ung cheng*.
263. 該聞錄 *Kai wen lu*, by 李旼 *Li T'ien*. Sung dyn.—P. 26.—S. Y.—Reprinted in the W. P.
- 263a. *K'ai pao Pen ts'ao*. See p. 46.
264. 開元天寶遺事 *K'ai yüan T'ien pao i shi*. Matters omitted in the annals of the reigns of K'ai yüan and T'ien pao (first half of the 8th cent.), by 王仁裕 *Wang Jen yü*. Wu tai period.—P. 26.—S. K. K. XIV. 17.
265. 甘藷錄 *Kan shu lu*. A treatise on the Sweet Potato (*Batatas edulis*), by 陸耀 *Lu Yao*. End of the 18th cent.—Reprinted in the C. T.
266. 甘藷疏 *Kan shu shu*. A treatise on the Sweet Potato. *Sü Kuang k'i* (see p. 82) of the Ming dyn. wrote a preface to it.—T. LIV.
267. 感應經 *Kan ying king*. Sung dyn.—Reprinted in the W. P.
268. 感應類從志 *Kan ying lei ts'ung chi*, by *Chang Hua* (see No. 637). Tsin dyn.—P. 28.—S. K. CXXX. 1.

269. *Kan su t'ung chi*. See p. 89.
270. 刊謬正俗 *K'an miu cheng su*, by 顏師古 *Yen Shi ku*. 7th cent.—P. 32.—Mayers 912.
271. 高士傳 *Kao shi ch'uan*. Biographies of celebrated scholars, by 皇甫謐 *Huang fu Mi*. A. D. 215—282.—Wylie 28.—Mayers 216.—Reprinted in the H. W.
272. 庚巳編 *Keng ki pien*, by 姚福 *Yao Fu*. Ming dyn.—P. 35.—Ming lit.
273. *Keng sin yü ts'e*. See p. 53.
274. 急救良方 *Ki kiu liang fang*, by *Chang Shi ch'e* (see No. 687). Ming dyn.—P. med. 19.—S. K. CV. 22.
275. 急就篇 *Ki tsiu pien* (the third character is sometimes changed for 章 *chang* or 草 *ts'ao*). An ancient dictionary, by 史游 *Shi Yu*, who lived under the reign of Han Yüan Ti. B. C. 48—32.—P. 27.—Han lit.—S. K. K. IV. 18.
276. 雞峰備急方 *Ki feng pei ki fang*. Medical prescriptions, by 張銳 *Chang Jui*. A. D. 1133.—P. med. 17.—W. H. CCXXIII. 9.
277. 雞肋篇 *Ki le pien*. Sung dyn.—S. K. K. XIV. 25.
278. *Ki chung chu shu*. See No. 70.
279. *Ki chung Chou shu*. See No. 247.
280. 劇談錄 *Ki t'an lu*. T'ang dyn.—S. K. K. XIV. 32.
281. 冀越集 *Ki yüe tsi*, by 熊太古 *Hiung T'ai ku* (cognomen *Ki yüe*). Yüan dyn.—P. 37.—S. K. CXLIII. 12.
282. 紀異錄 *Ki i lu*. T'ang dyn.—T.
283. 記事珠 *Ki shi chu*. T'ang dyn.—Reprinted in the W. P.
284. *Ki fu t'ung chi*. See p. 87.
285. *K'i kiu ch'uan*. See Nos. 33, 246.
286. 稽神錄 *Ki shen lu*, by 徐鉉 *Sü Hüan* of the Southern T'ang (10th cent.).—P. 24.—S. K. K. XIV. 33.
The W. P. reprints a treatise with the same title by 雍陶 *Yung T'ao*. T'ang dyn.
287. 啓蒙記 *K'i meng ki*, by 顧愷之 *Ku K'ai chi* of the Tsin dyn.—Sui lit.—S. Y.—Reprinted in the W. P.
288. 溪蠻叢笑 *K'i Man ts'ung xiao*, a work which seems to treat of some Southern aborigines, by 朱輔 *Chu Fu*. Sung dyn.—P. 31.—H. K. II. 27.

289. 奇疾方 *K'i tsi fang*. Medical prescriptions, by 夏德 *Hia Te* (liter. name 子益 *Tsz' i*). Sung dyn.—P. med. 20.—S. K. CIII. 42.
290. *K'i Po king*. See note 12 (1).
291. 家珍 *Kia chen*, by *Chang Kie ku* (see p. 48).—P. med. 16.
292. 家傳方 *Kia ch'uan fang*. Medical prescriptions, by 徐氏 *Sü (shi)*.—P. med. 19.—Sui lit.
293. 家訓 *Kia hün*, by 顏之推 *Yen Chi t'ui*. 6th cent.—P. 27.—Wylie 127.—Reprinted in the H. W.
294. 家藏方 *Kia ts'ang fang*. Medical prescriptions, by 楊惔 *Yang T'an*. Sung dyn.—P. med. 17.—W. H. CCXXIII. 10.
295. 嘉話錄 *Kia hua lu*, by 劉禹錫 *Liu Yü si* (liter. name 賓客 *Pin k'o*). T'ang dyn.—P. 36.—S. K. K. XV. 15.
296. 嘉祐雜誌 *Kia yu tsa chi*, by 江休復 *Kiang Hiu fu*. A. D. 1062.—P. 37.—Wylie 156.
- 296a. *Kia yu Pu chu Pen ts'ao*. See p. 46.
297. 甲乙經 *Kia i king*, by *Huang fu Mi* (see No. 271).—P. med. 15.—S. K. K. X. 5.
298. 賈氏談錄 *Kia shi T'an lu*. End of the 10th cent.—S. K. K. XIV. 17.
299. 江隣幾雜誌 *Kiang lin ki tsa chi*. The same as No. 296.—P. 37.
300. 江陵記 *Kiang ling ki*. Records of Kiang ling (the present King chou fu in Hu kuang). Frequently quoted in Chinese botanical works. This title appears in the list of the T. (10th cent.), but the work is probably of earlier date.
301. 江南別錄 *Kiang nan pie lu*. Account of Kiang nan (the present Kiang si), by 陳彭年 *Ch'en P'eng nien*. Beginning of the 11th cent.—P. 31.—S. K. K. VI. 24.
302. *Kiang nan t'ung chi*. See p. 89.
303. 江表傳 *Kiang piao ch'uan*.—T'ang lit.
304. *Kiang si t'ung chi*. See p. 90.
305. 江淹集 *Kiang Yen tsi*. Collection of the writings of *Kiang Yen* (see No. 513a). 6th cent.—P. 27.—Wylie 182.
306. 交州異物志 *Kiao chou i wu chi*. Account of remarkable objects in Kiao chou (Northern part of the present Annam), by *Yang Fu* (see No. 236).—Sui lit.

306a. 交州記 *Kiao chou ki*. Records of Kiao chou (see No. 306), by 劉欣期 *Liu Hin k'i*. Probably 4th or 5th cent.—P. 30.—Quoted in the *Ts'i min yao shu* (q. v.).

307. 解頤新語 *Kie i sin yü*. Ming dyn.—P. 37.—S. K. CXC VII. 28.

308. 解醒語 *Kie sing yü*. Yüan dyn.—K. and T.

309. 芥茶彙抄 *Kie ch'a hui ch'ao*. Treatise on the Teas produced on the Kie hills near Hu chou (Che kiang), by 冒襄 *Mao Siang*. 17th cent.—Wylie 119.—Reproduced in the C. T.

310. 戒菴漫筆 *Kie an man pi*. Ming dyn.—S. K. CXXVIII. 22.

311. 篋中方 *K'ie chung fang*, by 許孝宗 *Hü Hiao tsung*. P. med. 13.—T'ang lit.

The P. 13 notices a treatise with the same title by *Ts'ien I* (see No. 782). Sung dyn.

312. 建康記 *Kien k'ang ki*. Records of Kien k'ang, which in the 5th cent. was the name for the present Nan king. The work must therefore be a production of that period.

313. 建萬全讓命方 *Kien wan ts'üan hu ming fang*, by 楊退修 *Yang T'ui siu*. Sung dyn.—P. med. 17.—W. H. CCXXIII. 4.

314. 劍南方物略 *Kien nan fang wu lio*. A treatise on the productions of Kien nan (the present Sz' ch'uan), by *Ch'en Li* (see No. 133). Sung dyn.—S. K. K. VII. 23.

315. 劍南方物贊 *Kien nan fang wu tsan* (see the preceding), by *Sung K'i* (see No. 245).—P. 28.—S. K. K. VII. 23.

316. 兼明書 *Kien ming shu*, by 丘光庭 *K'iu Kuang t'ing*. Wu tai period.—S. K. K. XIII. 6.

317. 簡要濟衆方 *Kien yao tsi chung fang*. Medical prescriptions, by 周應 *Chou Ying*, a physician of the 11th cent.—P. med. 14.—W. H. CCXXIII. 1.

318. 乾坤秘韞 *K'ien k'un pi yün*, by *K'ü sien* (see p. 53). Ming.—P. med. 18.

319. 乾坤生意 *K'ien k'un sheng i*, by *K'ü sien* (see p. 53). Ming.—P. med. 18.

320. 乾象占 *K'ien siang chan*.—P. 35.—Sung lit. (Astronomy).

321. 金漳蘭譜 *Kin chang lan pu*. A treatise on the *lan* flower (*Cymbidium* and other orchidaceous plants), by 趙時庚 *Chao Shi keng*. Sung dyn.—Reprinted in the T. LXXXIII. and the K. XLIV.—S. K. K. XII. 24.
322. 金光明經 *Kin kuang ming king*. A Chin. translation of the Golden Light Sutra, made in the beginning of the 4th cent.—P. 27.—Dr. Edkins' Chin. Buddh. p. 109.
323. 金匱鉤玄 *Kin kui kou huan*. The original work was written by *Chu Chen heng* (see p. 49), and an enlarged edition was issued by *Tai Yüan li* (see No. 37).—P. med. 18.—S. K. K. X. 15.
324. 金匱要畧 *Kin kui yao lio*. A medical treatise, by *Chang Chung king* (see note 12 [5]).—P. med. 15.—Wylie 82.
325. 金匱玉函方 *Kin kui yü han fang*. Medical prescriptions, by *Chang Chung king* (see note 12 [5]).—P. med. 13.
326. 金陵地記 *Kin ling ti ki*. Records of Kin ling, which in the T'ang period was the name for the present Nan king.—Sung lit. (Geography). Probably of earlier date.
327. 金樓子 *Kin lou tsz'*. A historical treatise, by the Emperor 梁元帝 *Liang Yüan Ti* (A. D. 552—555), previously called 繹 *I*.—P. 35.—Wylie 127.
328. 金鑾密記 *Kin luan mi ki*. T'ang dyn.—W. H. CXCVI. 5.—Reprinted in the W. P.
329. 金門記 *Kin men ki*. T'ang dyn.—P. 32.—S. Y.
- 329a. 金史 *Kin shi*. History of the Kin dynasty. A. D. 1115—1234.—Wylie 19.
330. 錦繡萬花谷 *Kin siu wan hua ku*. End of the 12th cent.—Quoted sometimes under the name of *Wan hua ku*.—P. 32.—S. K. CXXXV. 35.
331. 禽蟲述 *K'in ch'ung shu*. A treatise on Birds and Insects, by 袁達德 *Yüan Ta te*. Beginning of the 16th cent.—P. 28.—S. K. CXVI. 43.
332. 禽經 *K'in king*. A treatise on Chinese Birds, by 師曠 *Shi K'uang*, an author of the Chou dyn.—Commented upon by *Chang Hua* (see No. 637) in the 3rd cent.—P. 28.—Han lit.—Wylie 123.—Reprinted in the H. W.

333. 荊州記 *King chou ki*. Account of King chou (the present Hupeh), by 盛弘之 *Ch'eng Hung chi*. 5th cent.—P. 25.—Sui lit.

This is probably the same work which is quoted in the *Ts'i min yao shu* (q. v.) as 荊州土地記 *King chou t'u ti ki*.

334. 荊川集 *King ch'uan tsi*, by 唐順之 *T'ang Shun chi*. Ming dyn.—P. 39.—S. K. K. XVIII. 34.

335. 荊湖近事 *King hu kin shi*. Sung dyn.—T.

336. 荊楚歲時記 *King Ts'u sui shi ki*. A calendar of the popular customs throughout the year in King and Ts'u (Hu kuang), by 宗懔 *Tsung Lin*. 6th cent.—P. 25.—Wylie 45.—Reprinted in the H. W.

337. 荊揚異物志 *King yang i wu chi*. On remarkable productions of King and Yang (Hu nan and the regions south of the lower Yang tsz' kiang), by 薛瑩 *Sie Yung*.—P. 30.—According to the W. P. Sie Yung was an author of the T'ang.

338. 經驗方 *King yen fang*. Medical prescriptions, by 陳旉 *Ch'en Ji hua* (see No. 795). Sung dyn.—P. med. 18.

A collection with the same title is noticed P. med. 14. Author 陳忞 *Ch'en Pien*. Sung dyn.—W. H. CCXXIII. 12.

339. 經驗良方 *King yen liang fang*, by 鄒福 *Tsou Fu*. Ming dyn.—P. med. 19.—Tung i pao kien 7.

340. 經心錄 *King sin lu*, by 宋俠 *Sung Kia*, a celebrated physician of the T'ang dyn. (7th cent.). See biography, *T'ang shu* 252.—P. med. 16.

341. 脚氣論 *Kio k'i lun*, by 深師 *Shen shi*, styled also 梅師 *Mei shi*.—P. med. 14.—P. XIII. 58 Shen shi is mentioned as an author of the *Tung Tsin* (4th cent.).

A work with the same title, belonging to the T'ang period, is noticed in the T'ang lit.

342. 九州記 *Kiu chou ki*. An account of the ancient nine provinces of China, apparently by 何晏 *Ho Yen*.—P. 25.—In the *San kuo chi* 9 is the biography of an author *Ho Yen*, 3rd cent.

343. 九華山錄 *Kiu hua shan lu*. An account of the mountain Kiu hua (see Appendix 17), by 周匹太 *Chou Pi ta* (see No. 61).—Reprinted in the *Yu ming shan ki* (q. v.).

344. 九鼎神丹秘訣 *Kiu ting shen tan pi k'ue*.—P. 29.—Sung lit.—H. K. X. 51 (Taoist works).—Mayers p. 346.
345. 九域志 *Kiu yü chi*, or 元豐九域志 *Yüan feng Kiu yü chi*, a Description of China, by 王存 *Wang Ts'un*. Published A. D. 1080.—W. H. CCIV. 4.
346. *Kiu huang pen ts'ao*. See p. 49.
347. 格致鏡原 *Ko chi king yüan*. Inquiry into the origin of affairs and things, by 陳元龍 *Ch'en Yüan lung*. 1652—1736.—S. K. K. XIV. 12.—Mayers 106.
348. 格致餘論 *Ko chi yü lun*, by *Tan K'i* (see p. 49).—P. med. 17.
349. 格古要論 *Ko ku yao lun*, by 曹昭 *Ts'ao Chao*. Beginning of the 15th cent.—S. K. CXXIII. 4.—The Ming lit. states that an enlarged edition of the work was published by 王均 *Wang Kün* in the middle of the 15th cent.—The P. 29 gives 王佐 *Wang Tso* as the author of a work of a similar name (*Ko ku lun*), which is identical with the above, as I have proved by comparing the quotations of the P. and the T.
350. 格物總論 *Ko wu tsung lun*. T'ang or earlier.
351. 客話 *K'o hua*, by 晁說 *Chao Yüe*, liter. name 以道 *I tao*. Sung dyn.—P. 38.—S. K. K. XIII. 18.
352. 鈎玄 *Kou h'üan*, by 鮮于樞 *Sien Yü ch'u*, who according to Wylie 133 was an author of the latter part of the 13th cent.
353. 峒嶼神書 *Kou lou shen shu*, by 南宮從 *Nan kung Ts'ung*.—P. 34.—Kou lou is the name of one of the twelve peaks of the Heng shan (Appendix 6), where Emperor Yü is said to have left an inscription.—Legge's Shu king, prol. 68.
354. 口訣 *K'ou k'ue*, by 孫兆 *Sun Chao*.—P. med. 14.—Ming lit.
355. 356. 古今注 *Ku kin chu*. An examination of historical antiquities, by 崔豹 *Ts'ui Pao*, a native of Yen (Peking). Middle of the 4th cent. The work treats also of plants.—P. 26.—Wylie 128 states that an amplification and elucidation of it was compiled by 馬縉 *Ma Kao* of the Wu tai period, with the title 中華古今注 *Chung hua ku kin chu*.—P. 32 notices a work with the latter title and gives 伏侯 *Fu Hou* as the author. The same author and work appear also in the T. P. (10th cent.). In the Sui lit. the

author is styled 伏無忌 *Fu Wu ki*. The K. writes his name 伏虔 *Fu K'ien*. Compare also No. 1002.

357. 古今錄驗方 *Ku kin lu yen fang*. Medical prescriptions, by *Ch'u Yü shi* (see No. 1066).—P. med. 13.

358. 古今詩話 *Ku kin shi hua*. Sung dyn.—P. 39.—S. Y.

359. 古今事類合璧 *Ku kin shi lei ho pi*, by 謝維新 *Sie Wei sin*. Sung dyn.—P. 31.—S. K. K. XIV. 6.

360. 古今韻會 *Ku kin yün hui*, by 熊忠 *Hiung Chung*. Yüan dyn.—The S. K. K. IV. 27 states that the authorship has been erroneously ascribed to 黃公紹 *Huang Kung shao*. The P. 27 writes the author's name 黃公武 *Huang Kung wu*.

361. 古樂府 *Ku lo fu*. Yüan dyn.—S. K. K. XIX. 16.—There existed two earlier works with the same title; one is mentioned in the Sui lit., the other as a production of the T'ang in the S. Y.

362. 顧渚山茶記 *Ku chu shan ch'a ki*. On the Tea of the mountain Ku chu (see Appendix 21), by *Lu Yü* (see No. 4).—W. H. CCVI. 2.

363. 菊譜 *Kü pu*. A treatise on the Chrysanthemum, by 劉蒙 *Liu Meng*. Beginning of the 12th cent.—P. 28.—Wylie 121.—Reprinted in the Ch. descr. part VII. 7.—K. XLVIII.—T. LXXXVII.

364. A treatise with the same title by *Fan Ch'eng ta* (see No. 388).—P. 28.—Reprinted in the Ch. l. c. 22; K. l. c., T. l. c.

365. The same title. Author 史正志 *Shi Cheng chi*. Middle of the 12th cent.—P. 28.—Wylie 121.—Reprinted in the Ch. l. c. 22; K. l. c., T. l. c.

366. 橘錄 *Kü lu*. A treatise on Oranges, by 韓產直 *Han Ch'an chi*, styled also 韓彥直 *Han Yen chi*. A. D. 1178.—P. 28.—Wylie 122.—Reprinted in the Ch. descr. part XV. 22; XVII. 42.

367. 居家必用 *Kü kia pi yung*. Ming dyn.—P. 33.—S. K. CXXX. 3.

368. 居山雜誌 *Kü shan tsa chi*. Ming. dyn.

369. 局方發揮 *Kü fang fa hui*, by *Tan K'i* (see p. 49).—P. med. 17.

370. 祛疑說 *K'ü i shuo*, by 儲泳 *Ch'u Yung*. 13th cent.—P. 37.—Wylie 133.

371. 瓜蔬疏 *Kua shu shu*. A treatise on Cucurbitaceous Plants and Vegetables, by *Wang Shi mou* (see No. 185).—Reprinted in the T. XLI.
372. 括地志 *Kua ti chi*, by *王泰 Wang T'ai* of Wei. Period of the three kingdoms.—T'ang lit.
373. 欵冬花賦 *K'uan tung hua fu*. A poem on the k'uan tung flower (Petasites), by *傅咸 Fu Hien* of the Tsin dyn.—K. XCVI. 22.—T. CXIX.
374. 管子 *Kuan tsz'*. Writings of the philosopher *管仲 Kuan Chung*, died 645 B. C.—P. 34.—Mayers 293.
375. 倦游錄 *Küan yu lu*, by *張師正 Chang Shi cheng*. Sung dyn.—P. 33.—Reprinted in the W. P.
376. 廣志 *Kuang chi*. An ancient work frequently quoted in Chinese botanical writings, by *郭義恭 Kuo I kung*. Liang dyn.—P. 26.—Sui lit.
377. 廣州記 *Kuang chou ki*. Account of Kuang tung. The P. 25 quotes two treatises with this title. One is by *顧微 Ku Wei* of the Tsin dyn. and is found reprinted in the W. P. The other, by *裴淵 P'ei Yüan*, seems to date from the same period. Both are quoted in the Ts'i min yao shu (q. v.).
378. 廣異記 *Kuang i ki*, by *Lo Shi* (see p. 86).—P. 24.
379. *Kuang K'ün fang p'u*. See p. 70.
380. *Kuang si t'ung chi*. See p. 91.
381. *Kuang tung t'ung chi*. See p. 91.
382. 廣五行記 *Kuang wu hing ki*.—P. 26.—Sung lit.
383. 廣雅 *Kuang ya*. An ancient dictionary, by *張揖 Chang I* (about A. D. 227—240), who enlarged the *Rh ya* by adding extracts from writers of the Han dyn. In the reign of *Sui Yang ti* (A. D. 605—617), whose cognomen was *廣 Kuang*, the title of the book was changed into *博雅 Po ya*, by which the work is sometimes known. *Chang I's* title was *博士 po shi* (Professor). *曹憲 Ts'ao Hien* of the Sui dyn. added the pronunciation and commentaries.—P. 28.—S. K. K. IV. 16.—Reprinted in the H. W.—The section on plants is reprinted in the T. III. V.
384. *Kuang yü ki*. See p. 69.

384a. 光福山記 *Kuang fu shan ki*. Account of the mountain Kuang fu (see Appendix 23). Ming dyn.—Yu min shan ki.

385. *Kui chou t'ung chi*. See p. 91.

386. 桂海果志 *Kui hai kuo chi*. A treatise on the fruits of Southern China, by *Fan Ch'eng ta* (see No. 388).—Reprinted in the T. XV.

387. 桂海草志 *Kui hai ts'ao chi*. On the plants of Southern China, by *Fan Ch'eng ta* (see No. 388).—Reprinted in the T., books I. and X.

388. 桂海虞衡志 *Kui hai yü heng chi*. A treatise on the geographical features, natural history, etc. of the Southern provinces of China, by 范成大 *Fan Ch'eng ta*. Latter part of the 12th cent. Biography, Sung shi 386. He was a native of *Wu hien* (Che kiang). His literary productions are frequently quoted in Chinese botanical works.—P. 30.—Wylie 45.

389. 閩閩事宜 *Kui ko shi i*. Ming dyn.?—P. 34.—H. K. III. 24.

390. 貴耳錄 *Kui rh lu*, by 張端義 *Chang Tuan i*. Sung dyn.—S. K. K. XIII. 23.

391. 癸辛雜志 *Kui sin tsa chi*, by *Chou Mi* (see No. 48).—P. 32.—Wylie 159.

392. 龜經 *Kui king*. On divination by means of the tortoise. T'ang dyn.—P. 28.—Wylie 106.

393. 歸田錄 *Kui t'ien lu*, by *Ou yang Siu* (see No. 867).—P. 26.—Wylie 156.—The W. H. CCXVI. 7 notices a work with the same title by *Li T'ien*, Sung dyn.

394. 鬼遺方 *Kui i fang*. Medical prescriptions, by 劉涓子 *Liu K'uan tsz'*. Towards the end of the Tsin dyn.—P. med. 14.—W. H. CCXXIII. 14.

395. 坤元錄 *K'un yüan lu*.—Sung lit. (Geography).

396. 崑山縣志 *K'un shan hien chi*. Description of the district of K'un shan (Su chou fu, Che kiang). Seems to date from the Sung dyn.

397. 菌譜 *Kün pu*. A treatise on Mushrooms, by 陳仁玉 *Ch'en Jen yü*. A. D. 1245. It treats of 27 species of mushrooms produced at T'ai chou in Che kiang.—P. 29.—Wylie 122.—Reprinted in the Ch. descr. part III.

398. 郡國志 *Kün kuo chi*.—P. 32.—This is a Geography of China, by 章懷 *Chang Huai* of the T'ang dyn., according to the S. Y.—The T. P. has a work *Yüan ho Kün kuo chi* (reign of Yüan ho, 806—21), probably the same.

399. *K'ün fang pu*. See p. 70.

400. 群書日抄 *K'ün shu ji ch'ao*, by 丘瓊山 *K'iu K'iuung shan*. Ming dyn.?—P. med. 20.—Ming shi 181.

401. 群書續抄 *K'ün shu sü ch'ao*, by 何子元 *Ho Tsz' yüan*, properly 何孟春 *Ho Meng ch'un*. Ming dyn. Biogr., Ming shi 191.—P. med. 20.

402. *K'ün shu tsi shi yüan hai*. See No. 917.

403. 羣碎錄 *K'ün sui lu*, by *Ch'en Ki ju* (see No. 28).—S. K. CXXXII. 26.

404. 孔帖 *K'ung t'ie*. Quoted in the K. and the T. Probably a work by *K'ung Ch'uan* (see No. 626) is meant.

405. 孔子家語 *K'ung tsz' kia yü*. Traditional words of Confucius, commented upon by 王肅 *Wang Su*, about A. D. 240.—P. 23.—Wylie 66.

406. 空同子 *K'ung t'ung tsz'*. Close of the 14th cent.—S. K. CXXIV. 13.

407. 國史補 *Kuo shi pu*, by 李肇 *Li Chao*. Beginning of the 9th cent.—P. 31.—S. K. K. XIV. 14.

408. 國語 *Kuo yü*. Remarks concerning the States of ancient China, by *Tso K'iu ming*, the author of the *Tso ch'uan* (see No. 89).—P. 30.—Wylie 6.

409. 果然賦 *Kuo jan fu*.—P. 28 (in some editions of the P. we read 異然賦 *I jan fu*), by 鍾毓 *Chung Yü*. 3rd cent. See his biography, *San kuo chi* (*Wei shu*) 13.

410. 果疏 *Kuo shu*. A treatise on Garden fruits, by *Wang Shi mou* (see No. 185).—Reprinted in the T. XV.

411. 蘭譜 *Lan pu*. A treatise on the *lan* flower (*Cymbidium* and other orchidaceous plants), by *Ch'en Jen yü* (see No. 397).—H. K. III. 6.

412. A treatise with the same title by 王貴學 *Wang Kuei hio*. Sung dyn.—S. K. CXVI. 33.—Reprinted in the K. XLIV.

413. Same title. Author *Kao Lien* (see No. 908).—Wylie 121.

414. 蘭室秘藏 *Lan shi pi ts'ang*, by Tung Yüan (see p. 48).—P. med. 16.

415. 蘭言 *Lan yen*. A treatise on the *lan* flower, by Mao Siang (see Nos. 309 and 411).—Reprinted in the C. T.—Wylie 121.

416. 瑯嬛記 *Lang hūan ki*. Yüan dyn.—S. K. CXXXI. 9.

417. 琅瑯漫鈔 *Lang ye man ch'ao*, by 文林 *Wen Lin*. Ming dyn.—P. 35.—S. K. CXXVII. 13.

418. 老學菴筆記 *Lao hio an pi ki*, by Lu Yu (see No. 553).—Wylie 132.

419. 老子 *Lao tsz'*. The writings of 老君 *Lao Kün*, the reputed founder of the Taoist system. Close of the 6th cent. B. C.—P. 34.—Mayers 336.

420. 勞瘵方 *Lao chai fang*. Medical prescriptions, by 崔知悌 *Ts'ui Chi ti*. 7th cent.—P. med. 14.—Biogr., T'ang shu 239.

421. *Lei kung P'ao chi lun*. See p. 41.

422. *Lei kung Yao tui*. See p. 40.

423. 類林 *Lei lin*. Ming dyn.—S. K. CXXXII. 7.

424. 類篇 *Lei pien*. A dictionary, by 司馬光 *Sz' ma Kuang*. A. D. 1009—1086.—P. 30.—Wylie 8.

425. 類說 *Lei shuo*, by 曾慥 *Ts'eng Ts'ao*. Sung dyn.—P. 36.—S. K. K. XIII. 33.

426. 冷齋夜話 *Leng chai ye hua*. Close of the 11th cent.—Wylie 131.

427. 楞嚴經 *Leng yen king*. A translation of the Lenga sutra, made in A. D. 705 by a Hindoo monk at Canton.—P. 37.—Edkins' Chin. Buddh. 289.

428. 荔枝譜 *Li chi pu*. A treatise on the *Lichi* fruit (*Nephelium Litchi*), by 蔡襄 *Ts'ai Siang*. A. D. 1059.—P. 28.—Reprinted in the Ch. descr. part XVII. 49 and T. CCLXXIII.

429. Same title. Author 宋珏 *Sung Kio*. Ming dyn.—Reprinted in the Ch. l. c. 56 and T. l. c.

430. Same title. Author 曹蕃 *Ts'ao Fan*. Ming dyn.—Reprinted in the Ch. l. c. 69 and T. l. c.

431. Same title. Author 徐勣 *Sü Po*. Ming dyn.—Biogr., Ming shi 286.—Reprinted in the Ch. l. c. 73 and T. CCLXXIV.

432. Same title. Author 鄧慶宗 *Teng K'ing ts'ai*, liter. name 道協 *Tao hie*. Ming dyn.—S. K. CXVI. 36.—Reprinted in the Ch. l. c. 85 and T. l. c.

433. Same title. Author 屠本峻 *T'u Pen tsün*. Ming dyn.

434. Same title. Author 黃履庚 *Huang Li keng*. Ming dyn.

435. 荔枝話 *Li chi hua*. Miscellaneous observations on the Lichi fruit, by 林嗣環 *Lin Sz' huan*. Present dyn.—Wylie 122.

436. 李孝伯傳 *Li Hiao po ch'uan*.—P. 24.—*Li Hiao po's* biography is found in the Hou Wei shu (see No. 172) book 53.

437. 李寶臣傳 *Li Pao ch'en ch'uan*.—P. 24.—See T'ang shu 211, Biography of *Li Pao ch'en*.

438. 李義山集 *Li I shan tsi*. Writings of *Li I shan*. T'ang dyn.—P. 39.—S. K. CLI. 10.

439. 李紳文集 *Li Shen wen tsi*. Writings of *Li Shen*. T'ang dyn.—P. 39.—S. K. K. XV. 18.

440. *Li shi Yao lu*. See p. 40.

441. 李太白集 *Li T'ai po tsi*. Writings of *Li T'ai po*. 8th cent.—P. 38.—Wylie 183.

442. *Li hi*. See p. 33.

443. 禮斗威儀 *Li tou wei i*. 4th or 5th cent.—P. 33.

444. *Li sao pien cheng*. See No. 74.

445. 離騷草木疏 *Li sao ts'ao mu shu*. Commentary on the plants mentioned in *K'ü Yüan's* celebrated poem *Li sao* (see No. 74), by 吳仁傑 *Wu Jen kie*. Sung dyn. About 50 plants are spoken of there.—S. K. K. XV. 1.—Reprinted in the collection *Chi pu tsu chai* (Wylie p. 214).

A treatise with the same name is mentioned in the Sui lit. Author 劉杳 *Liu Yao* of the Liang dyn.

446. *Li tai ti li chi yün pien kin shi*. See p. 69.

447. 兩京記 *Liang king ki*. Description of the two metropolitan cities of the T'ang dyn., by 韋述 *Wei Shu*. 8th cent.—P. 29.—Wylie 45.

448. 兩山墨談 *Liang shan mo t'an*, by 陳霆 *Ch'en Ting*. Ming dyn.—P. 35.—S. K. CXXVI. 7.

449. 梁簡文帝勸醫文 *Liang Kien Wen Ti kuan i wen*.—P. 27.—By the Emperor *Kien Wen Ti* (550—52).

450. 梁書 *Liang shu*. History of the Liang dynasty. A. D. 502—557, by 蕭顯明 *Siao Hien ming*.—P. 23.—But the Liang shu now extant is by 姚思廉 *Yao Sz' lien*. 7th cent.—Wylie 13.

451. 梁四公子記 *Liang Sz' kung tsz' ki*. Chronicle of the four worthies of the Liang dynasty, by 張說 *Chang Yüe*. A. D. 667—730.—P. 24.—W. H. CXCVIII. 5.—Mayers 32.

452. 涼州異物志 *Liang chou i nu chi*. Remarkable objects in the (ancient) province of Liang (the present Kan su), by 萬震 *Wan Chen*.—P. 30.—Sui lit.—The author lived in the 3rd cent.

453. 涼州記 *Liang chou ki*. Description of the province of Liang chou (the present Kan su). 4th or 5th cent.—S. Y.

454. 蓼花洲閑錄 *Liao hua chou hien lu*, by 高文虎 *Kao Wen hu*. Sung dyn.—P. 38.—H. K. III. 49.—Reprinted in the W. P.

455. 遼史 *Liao shi*. History of the Liao dynasty. A. D. 916—1125, by 脫脫 *T'o t'o*. Yüan dyn.—P. 30.—Wylie 18.

456. 列仙傳 *Lie sien ch'uan*. Taoist biographies, by 劉向 *Liu Hiang*. B. C. 80—9.—P. 24.—Wylie 175.

457. 列星圖 *Lie sing t'u*.—P. 35.—Mentioned in the T. P. (10th cent.). Probably of earlier date.

458. 列子 *Lie tsz'*. Lectures of 列禦寇 *Lie Yü k'ou*, a Taoist philosopher, early in the 4th cent. B. C., published by his pupils and commented upon by 張湛 *Chang Chan*. 4th cent. A. D.—P. 23.—Wylie 174.

459. 鍊粉圖 *Lien fen t'u*, by 孤剛子 *Hu Kang tsz'*.—P. 26.—The work and the author are mentioned in the Sung lit.—The name of *Hu Kang tsz'*, apparently a Taoist author, occurs already in the Sui lit.

460. 臨川記 *Lin ch'uan ki* (Lin ch'uan in Kiang si), by 荀伯子 *Sün Po tsz'* of the Liu Sung dyn. (5th cent.). See biography, Sung shu 60.—P. 33.—T. P.

461. 臨川集 *Lin ch'uan tsi*, by 王荊公 *Wang King kung*.—P. 39.—The latter is the title of the celebrated scholar 王安石 *Wang An shi*. A. D. 1021—1086.—Mayers 807.—S. K. K. XV. 38.

462. 臨海異物志 *Lin hai i nu chi*. An account of remarkable objects in the department of Lin hai (in Che kiang), by

沈 瑩 *Ch'en Yung*. 5th cent, perhaps earlier.—P. 30.—S. Y.—
This treatise is quoted in the *Ts'i min yao shu* (q. v.).

463. 臨海水土記 *Lin hai shui t'u ki*, by *Ch'en Yung* (see No. 462).—P. 29.—Sui lit.

464. 林邑記 *Lin i ki*. An account of Lin i (Cochinchina), by 東方朔 *Tung fang So*. 2nd cent. B. C.—P. 30.—Mayers 689.

465. 嶺南異物志 *Ling nan i wu chi*. Account of remarkable objects in the Southern provinces of China, by 孟瑄 *Meng Kuan*. Beginning of the 9th cent.—P. 25.—Sh. Y.

466. 嶺南方 *Ling nan fang*, by 王方慶 *Wang Fang k'ing*. T'ang dyn.—P. med. 17.—T'ang lit.

467. 嶺南風物記 *Ling nan feng wu ki*. Account of the Southern provinces of China, by 吳綺 *Wu K'i*. Present dyn.—S. K. K. VII. 26.

468. 嶺南雜記 *Ling nan tsa ki*. Record of the geography, natural productions, etc. of Southern China, by 吳震方 *Wu Chen fang*. Present dyn.—Wylie 50.

469. 嶺表錄異 *Ling piao lu i*. Account of the natural productions of China, by 劉恂 *Liu Sün*. T'ang dyn.—P. 25.—S. K. K. VII. 23.

470. 嶺外代答 *Ling wai tai ta*. Geographical and other accounts of Southern China and foreign countries, by 周去非 *Chou K'ü fei*. 12th cent.—Wylie 45.

471. 靈樞經 *Ling ch'u king*. A work on internal maladies and the practice of acupuncture, ascribed to the Emperor *Huang Ti* (see p. 27), but really for the greater part the production of *Wang Ping* (see No. 204).—P. med. 15.—Wylie 78.

472. 靈苑方 *Ling yüan fang*. Medical prescriptions, by *Ch'en Ts'un chung* (see No. 510).—P. med. 14.

473. 零陵總記 *Ling ling tsung ki*. Description of Ling ling (Yung chou fu, Hu nan). Sung dyn.—W. H. CCV. 6.

474. 六書正譌 *Liu shu cheng o*, by 周弼 *Chou Pi*, according to the P. 27.—But the S. K. K. IV. 22 ascribes this work to 周百琦 *Chou Po k'i* of the Yüan, whilst *Chou Pi* is mentioned there, XVI. 42, in connection with another work, as an author of the Sung.

475. 六書本義 *Liu shu pen i*. A dictionary, by 趙撝謙 *Chao Hui k'ien*, liter. appellation 古則 *Ku tse*.—P. 27.—S. K. K. IV. 23.
476. 六書精蘊 *Liu shu tsing yün*. A dictionary, by 魏子才 *Wei Tsz' ts'ai*, properly 魏校 *Wei Kiao*. Ming dyn.—Biogr., Ming shi 282.—P. 27.—S. K. XLIII. 14.
477. *Liu t'ie*. See No. 626.
478. 柳宗元傳 *Liu Tsung yüan ch'uan*. Biography of *Liu Tsung yüan*, a celebrated poet of the 8th cent. Liter. name 子厚 *Tsz' hou*.—P. 24.—Mayers 419.
479. 柳子厚文集 *Liu Tsz' hou wen tsi*. Poems of *Liu Tsung yüan* (see No. 478).—P. 38.—Mayers 419.
480. 劉根別傳 *Liu Ken pie ch'uan*. Biography of *Liu Ken*, who according to the Sh. Y. lived about B. C. 30.—P. 37.
481. *Liu kiu kuo chi lio*. See p. 92.
482. 洛陽花木記 *Lo yang hua mu ki*. Flowers and trees of Lo yang, the ancient Chinese metropolis in Ho nan, by 周氏 or 周叙 *Chou Sü*. Second half of the 11th cent.—P. 29.—Reprinted in the T. X.
483. 洛陽伽藍記 *Lo yang kia lan ki*. Description of the Buddhist establishments in Lo yang, the metropolis during the Northern Wei, by 楊銜之 *Yang Hüan chi*, an officer of that dynasty. 5th cent.—Reprinted in the H. W.—P. 35.—Wylie 44.
484. 洛陽名園記 *Lo yang ming yüan ki*. On the Gardens of Lo yang (see No. 482), by 李格非 *Li Ko fei*. Sung dyn.—P. 29.—S. K. K. VII. 20.
485. 洛陽牡丹記 *Lo yang mu tan ki*. A treatise on the mu tan flower (*Pæonia Moutan*) of Lo yang (see No. 482), by *Ou yang Siu* (see No. 867).—Reprinted in the Ch. descr. part XI. 55 and T. CCLXXXVII.
486. Same title. Author *Chou Sü* (see No. 482).—Reprinted in the T. l. c.
487. 羅浮山記 *Lo fou shan ki*. Record of the Lo fou mountain (see Appendix 29), by 郭之美 *Kuo Chi mei*. A. D. 1051.—W. H. CCVI. 4.—A work with the same name is mentioned already in the T. P. (10th cent.).

488. 羅浮山疏 *Lo fou shan shu* (see the preceding), by 竺法真 *Chu Fa chen*.—P. 31.—This work and the author are mentioned in the T. P., but may be of earlier date.

488a. *Lo kie ch'a ki*. See No. 995.

489. 樂休園菊譜 *Lo hui yüan kü pu*. On the Chrysanthemum in the garden Lo hui (?). Reprinted in the Ch. descr. part VII. 34. Apparently a production of the present dynasty.

490. 魯定公傳 *Lu Ting kung ch'uan*. An ancient narrative of 宋 *Sung*, prince of *Lu* (about B. C. 500), whose posthumous title was Ting kung.—P. 24.—Legge's Confucian Anal. p. 25.

491. 路史 *Lu shi*, by 羅泌 *Lo Pi*. Sung dyn.—Wylie 24.

492. 錄異記 *Lu i ki*. A fabulous record by the Taoist priest 杜光庭 *Tu Kuang t'ing*. 10th cent.—P. 34.—Wylie 160.

But a work with the same title must have been extant in the 6th cent., as it is quoted in the *King ts'u sui shi ki* (see No. 336).

493. 陸龜蒙詩 *Lu Kui meng shi*. Poems of *Lu Kui meng*. T'ang dyn.—P. 27.—T'ang shu 196.

494. 廬陵記 *Lü ling ki*. Records of *Lü ling* (the present *Ki shui hien*, *Kiang si*). 5th or 6th cent.

495. 廬山記 *Lü shan ki*. An account of the mountain *Lü* (Appendix 30), by 陳令舉 *Ch'en ling kü*, liter. appellation 舜俞 *Shun yü*. 11th cent.—Wylie 44.

There are several treatises bearing the same title. One of them is quoted in the *Ts'i ming yao shu* (q. v.); two are quoted in the T. P.

496. 呂氏春秋 *Lü shi ch'un ts'iu*. A collection of historical notices of the early history of China, by 呂不韋 *Lü Pu wei*, died B. C. 237, the father of Emperor Shi Huang Ti.—P. 23.—Han lit.—Wylie 126.

497. 論衡 *Lun heng*. Critical disquisitions, by 王充 *Wang Ch'ung*. A. D. 19—90.—P. 27.—S. K. K. XIII. 15.—Mayers 795.—Reprinted in the H. W.

498. 龍城錄 *Lung ch'eng lu*. Historical records referring to the earlier part of the T'ang, by *Liu Tsung yüan* (see No. 478).

499. 龍江錄 *Lungkiang lu*.—P. 38.—This is apparently the same work as that quoted in the Ming lit. with the title 龍江夢錄 *Lungkiang meng yü lu*, by 唐錦 *Tang Kin*.

500. 龍魚河圖 *Lung yü ho t'u.*—P. 27.—Quoted in the *Ts'i min yao shu* (q. v.).

501. 馬經 *Ma king.* A treatise on horses, apparently.—P. 28.—Sung lit.

502. *Ma ch'u t'u pu.* See p. 81.

503. 茅山志 *Mao shan chi.* Description of the Mao mountain (see Appendix 19), by 劉大彬 *Liu Ta pin*, a Taoist priest of the Yüan dyn.—S. K. LXXVI. 1.

504. 茅山記 *Mao shan ki* (see No. 503), published A. D. 1062.—P. 31.—W. H. CCVI. 2.

505. 茅亭客話 *Mao t'ing k'o hua*, by 黃休復 *Huang Hui fu.* Sung dyn.—P. 27.—S. K. K. XIV. 33.

506. *Mao shi niao shou ts'ao mu ch'ung yü shu.* See p. 33.

507. 梅譜 *Mei pu.* Treatise on the *mei* (*Prunus*, var. species), by *Fan Ch'eng ta* (see No. 388).—P. 28.—S. K. K. XII. 22.

508. 梅堯臣詩 *Mei Yao ch'en shi.* Poems of *Mei Yao ch'en.* 11th cent.—P. 38.—Sh. Y. (Sung period).

509. 捫蝨新話 *Men shi sin hua*, by 陳善 *Ch'en Shan.* Sung dyn.—S. K. CXXVII. 3.

510. 夢溪筆談 *Meng k'i pi t'an*, by 沈括 *Ch'en Kua.* Liter. appellation 存中 *Ts'un chung.* Middle of the 11th cent.—See biogr., Sung shi 331.

There is an appendix 補筆談 *Pu Pi t'an*, and a supplementary book besides, entitled 續筆談 *Sü Pi t'an.*

511. 夢餘錄 *Meng yü lu*, by *T'ang Kin* (see No. 499).

512. 棉花圖 *Mien hua t'u.* A treatise on the cultivation of Cotton, with 16 engravings, published in 1765 by the Viceroy of Chibli.

513. 閩中記 *Min chung ki*, by 林譜 *Ling Sü.* T'ang dyn.—W. H. CCV. 10.

513a. 閩中草木頌 *Min chung ts'ao mu kung.* Eulogy of the plants of Min (Fu kien), by *Kiang Yen* (see No. 305).—Reprinted in the T. II.

514. 閩郡疏 *Min pu shu.* A geographical description of Fu kien, detailing also the natural productions of that province, by *Wang Shi mou* (see No. 185).—S. K. LXXVII. 17.

515. 閩書 *Min shu*. A description of the province of Fu kien, by 何喬遠 *Ho K'iao yüan*. End of the 16th cent.—S. K. LXXIV. 19.—Accounts of plants found in this work are reprinted in the T. CLXXXII.

516. 名醫錄 *Ming i lu*. History of celebrated physicians.—P. med. 16.—Sung lit.

517. *Ming i pie lu*. See p. 42.

518. 名山記 *Ming shan ki*. A work on celebrated mountains, by 王子年 *Wang Tsz' nien* (see No. 736).—W. H. CCXV. 4.

A work with the same title, published in the Ming period, is noticed in the S. K. LXXVIII. 6.

519. 名山游記 *Ming shan yu ki*. An account of the celebrated mountains of China, by *Wang Shi mou* (see No. 185).

520. 名苑 *Ming yüan*, by *Sz' ma Kuang* (see No. 424).—P. 28.

521. 明皇雜錄 *Ming huang tsa lu*, by 鄭處誨 *Cheng Ch'u hui*. T'ang dyn.—P. 26.—S. K. K. XIV. 14.

522. 明醫雜著 *Ming i tsa chu*, by 王節齋 *Wang Tsie chai*. Ming dyn. (?)—P. med. 20.—H. K. VI. 32.

522a. *Ming shi*. See p. 135.

523. 明道雜誌 *Ming tao tsa chi*, by 張耒 *Chang Lei*. Sung dyn.—See biogr., Sung shi 414.—P. 37.—S. Y.

524. 墨莊漫錄 *Mo chuang man lu*, by 張邦基 *Chang Pang ki*. Middle of the 12th cent.—Wylie 132.

525. 墨客揮犀 *Mo k'o hui si*, by 彭乘 *P'eng Ch'eng*, a native of Shu (*Sz' ch'uan*). First half of the 11th cent.—P. 36.—Sh. Y.—S. K. XIV. 22.

526. 墨譜 *Mo pu*. A treatise on Ink, by *Su I kien* (see No. 53).—P. 29.—S. K. K. XII. 18.

527. 墨子 *Mo tsz'*. Writings of 墨翟 *Mo Ti*, a celebrated philosopher between the 4th and 5th centuries B. C.—P. 34.—Wylie 125.

528. 脈經 *Mo king*. A treatise on the Pulse, by *Wang Shu ho* (see note 12 [7]).—P. med. 15.—Wylie 78.

529. 脈訣刊誤 *Mo küe k'an wu*, by 戴啓宗 *Tai K'i tsung*. Yüan dyn.—P. med. 16.—S. K. K. X. 15.

530. 牡丹八書 *Mu tan pa shu*. Eight epistles on the mu tan flower (*Pæonia Moutan*), by 薛鳳翔 *Sie Feng siang*. Ming dyn.—S. K. CXVI. 32.—Reprinted in the Ch. descr. part XI. 81 and T. CCLXXXVIII.

531. 牡丹譜 *Mu tan pu*. A treatise on *Pæonia Moutan*, by *Ou yang Su* (see No. 867).—P. 28.—T. CCLXXXVII.—See also No. 887.

532. 牡丹榮辱志 *Mu tan yung ju chi*. A classified arrangement of the many varieties of *Pæonia Moutan*, by 丘璿 *K'iu Sün*. Sung and Yüan period.—S. K. CXLIV. 17.—Wylie 121.—Reprinted in the T. CCLXXXVII.

533. 木棉譜 *Mu mien pu*. A treatise on Cotton, published during the Ming period, with a preface by *Wang Siang tsin* (see p. 70).—Reprinted in the T. CCCIII.

534. Same title. Author 褚華 *Ch'u Hua*. Towards the close of the last cent.—Wylie 77.—Reprinted in the C. T.

535. *Mu mien t'u pu*. See p. 81.

536. 牧豎閑談 *Mu shu hien t'an*, by 景煥 *King Huan*. Sung dyn.—P. 35.—S. Y.

537. 幕府燕閑錄 *Mu fu yen hien lu*, by 畢仲詢 *Pi Chung sün*. Sung dyn.—P. 38.—S. Y.—Reprinted in the W. P.

538. 穆天子傳 *Mu t'ien tsz' ch'uan*. A narrative of the adventures of the Emperor Mu wang (1000 B. C.) on his journey to the West. Said to have been found in a tomb of one of the Wei princes, in 281 A. D.—P. 24.—Wylie 153.

539. 南州異物志 *Nan chou i wu chi*. A work on remarkable objects in the Southern provinces, by *Wan Chen* (see No. 452).—P. 25.—Quoted in the *Ts'i min yao shu* (q. v.).

A work of the same title by *Sü Piao* (see No. 540) is quoted in the *Hai yao pen ts'ao* (see p. 45).

540. 南州記 *Nan chou ki*. Account of the Southern provinces, by 徐表 *Sü Piao*.—P. 25.—Work and author quoted in the *Ts'i min yao shu* (q. v.).

541. 南憲記談 *Nan ch'uang ki t'an*. Early part of the 12th cent.—P. 31.—Wylie 157.

542. 南中志 *Nan chung chi* (erroneously sometimes quoted as 中南志 *Chung nan chi*), apparently a description of Southern China, by *Ch'ang K'ü* (see No. 190).—S. K. LXXVIII. 10.

543. 南中八郡志 *Nan chung pa kün chi*. This, frequently quoted in the T., is apparently a production of the 4th or 5th cent. It is probably the same as the 南州八郡志 *Nan chou pa chung chi*, quoted in the 'Ts'i min yao shu (q. v.).

544. 南方異物志 *Nan fang i wu chi*. An account of remarkable productions of the provinces of Southern China, by 房千里 *Fang Ts'ien li*. 5th cent. or earlier.—P. 25.—Quoted in the 'Ts'i min yao shu (q. v.).

545. 南方記 *Nan fang ki*. Account of the Southern provinces of China, by *Sü Piao* (see No. 540). Quoted in the *Wei wang hua mu chi* and the 'Ts'i min yao shu (q. v.).

546. *Nan fang ts'ao mu ch'uan*. See p. 38.

547. 南海古蹟記 *Nan hai ku tsi ki*, by *Wu Lai* (see No. 1125).

548. 南行方 *Nan hing fang*. Medical prescriptions, by 楊炎 *Yang Yen*, died A. D. 781.—P. med. 20.—Mayers 898.

549. 南康記 *Nan k'ang ki*. Records of Nan k'ang (in Kiang si), by 鄧顯明 *Teng Hien ming* (sometimes written 鄧德明 *Teng Te ming*) of the 4th or 5th cent.—P. 32.—S. Y.—T. P.

The T. P. mentions a work with the same title by 王歆之 *Wang Hin chi*.

550. 南蠻記 *Nan Man ki*. Account of the Southern aborigines.—P. 25.—Sung lit.

551. 南部新書 *Nan pu sin shu*. Published about A. D. 975.—S. K. K. XIV. 18.

552. 南徐州記 *Nan Sü chou ki*, by *Shan K'ien chi* (see No. 1041).—Sui lit.—Nan Sü comprised the Northern part of the present Kiang su.

553. 南唐書 *Nan T'ang shu*. History of the Southern T'ang. A. D. 937—960, by 陸游 *Lu Yu*. 12th cent.—P. 30.—Wylie 33.

554. 南齊書 *Nan Ts'i shu*. History of the Southern Ts'i dynasty. A. D. 479—501, by 蕭子顯 *Siao Tsz' hien*. 5th cent.—P. 30.—Wylie 13.

555. 南都賦 *Nan tu fu*, by 張衡 *Chang Heng* of the After Han dyn.—S. Y.

556. 南陽活人書 *Nan yang huo jen shu*, by 朱肱 *Chu Kung*, pseudonym 無求子 *Wu k'iu tsz'*. Sung dyn.—P. med. 21.—Tung i pao kien 5.—W. H. CCXXII. 8.

557. 南陽詩注 *Nan yang shi chu*. Sung dyn. (?)—T.

558. 南岳魏夫人傳 *Nan yo Wei fu jen ch'uan*. Narrative of a lady Wei of Nan yo (Heng mountain in Hu nan). Seems to be a Taoist tale referring to the Tsin dynasty.—P. 24.—Sui lit.—W. H. CCXXIV. 8.

559. 南越志 *Nan Yüe chi*. A description of Nan Yüe (South-China), by 沈懷遠 *Ch'en Huai yüan*. Liu Sung dyn. (5th cent.).—W. H. CCV. 12.—Reprinted in the W. P.—Quoted in the Ts'i min yao shu (q. v.), which refers also to a treatise 南越經 *Nan Yüe king*.

Two treatises bearing the title *Nan Yüe chi*, by different authors of the T'ang and Sung periods, are mentioned in the S. Y.

560. 南越行紀 *Nan Yüe hing ki*, by 陸賈 *Lu Kia*. B. C. 200.—Quoted in the Nan fang ts'ao mu ch'uan (q. v.).—Mayers 437.

561. *Nan Yüe pi ki*. See p. 92.

562. 難經 *Nan king*. A work on doubtful medical questions, by Ts'in Yüe jen. 6th cent. B. C. (see note 12 [3]).—P. med. 15.—Mayers 553.

563. 能改齋漫錄 *Neng kai chai man lu*. Middle of the 12th cent.—Wylie 128.

564. 涅槃經 *Nie p'an king*. A Chinese translation of the Nirvana Sutra. A. D. 170.—P. 37.—Edkins' Chin. Buddhism p. 108.

565. *Nung cheng ts'üan shu*. See p. 82.

566. *Nung sang i shi tso yao*. See p. 82.

567. *Nung sang tsi yao*. See p. 82.

568. *Nung sang t'ung küe*. See p. 81.

569. *Nung shu*. See No. 35 and p. 81.

570. 峨眉山志 *O mei shan chi*. A description of the O mei mountain (see Appendix 36). Sung dyn.—W. H. CCVI. 1.—The S. K. LXXVI. 25, 28 mentions two works with the same title, both published during the present dyn. in the middle of the 17th cent.

571. 歐陽公文集 *Ou yang kung wen tsi*. Writings of *Ou yang Siu* (see No. 867).—Wylie 185.

572. *Pa Min t'ung chi*. See p. 90.

573. 稗史 *Pai shi*, by 仇遠 *Ch'ou Yüan*. Yüan dyn.—P. 37.—S. Y.

A work with the same title by 徐克昭 *Sü K'o chao*, Ming dyn., is noticed in the H. K. III. 60.

573a. 盤山志 *P'an shan chi*. A description of the P'an mountain, north-east of Peking (see Appendix 37), published in 1754.—S. K. K. VII. 19.

574. 保慶集 *Pao k'ing tsi*. Sung dyn.—P. med. 20.—W. H. CCXXIII. 9.

575. 保生要錄 *Pao sheng yao lu*. T'ang dyn.—P. med. 20.—S. Y.

576. 保壽堂經驗方 *Pao shou t'ang king yen fang*, by 劉松石 *Liu Sung shi*. Ming dyn.—P. med. 18.

577. 寶貨辨疑 *Pao huo pien i*. 12th or 13th cent.—P. 29.—H. K. II. 34.

578. 寶藏論 *Pao ts'ang lun*, by 軒轅述 *Hien Yüan shu*. Wu tai period.—P. 25.—W. H. CCXXII. 7.

579. 抱朴子 *Pao p'o tsz'*. A work on Taoist philosophy, alchemy, etc., giving also some accounts of medicinal plants, by *Ko Hung* (see note 12 [8]) of the 3rd and 4th cent.—P. 23.—Wylie 175.—Reprinted in the H. W.

580. *P'ao chi lun*. See p. 41.

581. 北征錄 *Pei cheng lu*, by 金幼孜 *Kin Yu tsz'*. Ming dyn.—P. 33.—S. K. LII. 38.

582. 北戶錄 *Pei hu lu*. A geographical account of Southern China, by 段公路 *Tuan Kung lu*. T'ang dyn.—P. 33.—S. K. K. VII. 23.—Reprinted in the W. P.

583. 北夢瑣言 *Pei meng so yen*, by 孫光憲 *Sun Kuang hien*. Middle of the 10th cent.—P. 26.—Wylie 155.

584. 北邊備對 *Pei pien pei tui*. Sung dyn.—S. K. LXXV. 27.

585. 北史 *Pei shi*. History of the Northern Dynasties. A. D. 386—581, by 李延壽 *Li Yen shou*.—P. 23.—Wylie 13.

586. 北堂書鈔 *Pei t'ang shu ch'ao*. A celebrated collection of literary productions, by 虞世南 *Yü Shi nan*. T'ang dyn.—P. 31.—S. K. K. XIV. 1.
587. *Pen king*. See p. 29.
588. 本事方 *Pen shi fang*. Medical prescriptions, by 許叔微 *Hü Shu wei*. Sung dyn.—P. med. 17.—S. K. K. X. 9.
589. 本事詩 *Pen shi shi*, by 孟榮 *Meng K'i*. T'ang dyn.—P. 23.—Reprinted in the W. P.
590. *Pen ts'ao fa hui*. See p. 49.
591. *Pen ts'ao hui pien*. See p. 54.
592. *Pen ts'ao kang mu*. See p. 54.
593. *Pen ts'ao ko kua*. See p. 48.
594. *Pen ts'ao meng ts'üan*. See p. 54.
595. *Pen ts'ao pie shuo*. See p. 47.
596. *Pen ts'ao shi i*. See p. 45.
597. *Pen ts'ao sing shi lei*. See p. 46.
598. *Pen ts'ao tsi yao*. See p. 53.
599. *Pen ts'ao yen i*. See p. 48.
600. *Pen ts'ao yen i pu i*. See p. 49.
601. *Pen ts'ao yin i*. See p. 45.
602. 彭祖服食經 *P'eng Tsu fu shi king*. A treatise on garments and food, by *P'eng Tsu*.—P. med. 15.—Sui lit.—I am not aware whether the mythical *P'eng Tsu* is meant who is reputed to have attained a fabulous longevity.—Mayers 561.
603. 蓬憲日錄 *P'eng ch'uang jì lu*. Ming dyn.—S. K. CXXVIII. 20.—Reprinted in the W. P.
604. 筆記 *Pi ki*, by *Sung K'i* (see No. 245). Sung dyn.—S. K. K. XIII. 16.
A work with the same title by *Ch'en K'i ju*. Ming dyn. (see No. 28).—S. K. CXXII. 25.—See also S. K. CXLIII. 30.
605. 筆譜 *Pi pu*. A treatise on Pencils, by *Su I kien* (see No. 53).—P. 29.—S. K. K. XIII. 18.
606. 必效方 *Pi hiao fang*, by *Meng Shen* (see p. 45). T'ang dyn.—P. med. 14.
607. 秘訣 *Pi küe*. A treatise on the art of magic, by 左慈 *Tso Ts'z'*. 2nd cent.—P. 26.—Mayers 745.

608. 避暑錄 *Pi shu lu*, by 葉夢得 *Ye Meng te*, or 葉石林 *Ye Shi ln*. Sung dyn.—P. 36.—S. K. K. XIII. 20.

609. 碧雞漫志 *Pi ki man chi*. Sung dyn.—Wylie 203.

610. *P'i ya*. See p. 37.

611. 埤雅廣要 *P'i ya kuang yao*. An enlargement of the *P'i ya*, published in the Ming period.—S. K. CXLIV. 33.—The P. 28 quotes a work of a similar name, perhaps the same, 埤雅廣義 *P'i ya kuang i*.

612. 脾胃論 *P'i wei lun*. A treatise on the stomach, by *Tung Yüan* (see p. 48).—P. med. 16.

613. *Pie lu*. See p. 42 and p. 71.

614. 變化論 *Pien hua lun*, by *Yü Pao* (see No. 796).—P. 37.—Quoted in the *King ts'u sui shi ki* (q. v.).

615. 便民圖纂 *Pien min t'u tsuan*. Ming dyn.—P. 34.—Ming lit. (Agriculture).—S. K. CXXX. 5.

616. 辨惑論 *Pien huo lun*, by *Tung Yüan* (see p. 48).—P. med. 16.

617. 扁鵲方 *Pien Ts'iao fang*. Medical prescriptions of *Pien Ts'iao* (see note 12 [3]).—P. med. 13.

618. 賓退錄 *Pin t'ui lu*, by 趙與時 *Chao Yü shi*. Sung dyn.—P. 36.—S. K. K. XIII. 10.

619. 病原論 *Ping yüan lun*. A medical treatise, by 巢元方 *Ch'ao Yüan fang*. Beginning of the 7th cent.—P. med. 15.—S. K. K. X. 6.

620. 兵部手集方 *Ping pu shou tsi fang*, by 李絳 *Li Kiang*. 9th cent.—Biogr., *T'ang shu* 215.—P. med. 14.

621. 瓶花譜 *P'ing hua pu*. On plants growing in pots, by 張謙德 *Chang K'ien te*. Ming dyn.—S. K. CXVI. 36.—Reprinted in the T. X.

622. 瓶史 *P'ing shi*. On the cultivation of garden flowers, by 袁宏道 *Yüan Hung tao*. Ming dyn.—Biogr., *Ming shi* 288.—Reprinted in the T. X.

623. 瓶史月表 *P'ing shi yüe piao*. Calendar of garden flowers, by *T'u Pen tsun* (see No. 433).—Reprinted in the T. X.

624. 平泉草木記 *P'ing ts'üan ts'ao mu ki*. Account of the vegetable productions of *P'ing ts'üan* (Kien chou in Sz' ch'uan), by 李德裕 *Li Te yü*. A. D. 787—849.—P. 29.—W. H. CCV. 9.—Mayers 370.—Reprinted in the T. II.

625. 白虎通 *Po hu t'ung*. A system of Confucian dogmatics, by *Pan ku* (see No. 941), died A. D. 92.—P. 32.—Wylie 127.—Reprinted in the H. W.

626. 白孔六帖 *Po K'ung liu t'ie*.—P. 31.—There is a collection of extracts, *Liu t'ie*, by 白居易 *Po K'ü i* of the T'ang dyn. It was enlarged by 孔傳 *K'ung Ch'uan* of the Sung dyn.—S. K. K. XIV. 2.

627. 白沙集 *Po sha tsi*, by 陳獻章 *Ch'en Hien chang*. Ming dyn.—P. 39.—S. K. K. XVIII. 19.

628. 白獺髓 *Po t'a sui*. Sung dyn.—P. 38.—S. Y.

629. 白澤圖 *Po tse t'u*.—P. 25.—Sui lit.—*Po tse* is the name of a fabulous animal.

630. 百川學海 *Po ch'uan hio hai*. A collection of the productions of authors of note, made during the Sung dyn.—P. 36.—H. K. III. 1.

631. 百一選方 *Po i süan fang*, by 王璆 *Wang K'iu*. Sung dyn.—P. med. 20.—W. H. CCXXIII. 10.

632. 百感錄 *Po kan lu*, by 陳相 *Ch'en Siang*, a Taoist priest. Ming dyn.—P. 37.—S. K. CXXIV. 23.

633. 百病方 *Po ping fang*. A collection of medical prescriptions, by 胡洽居士 *Hu Hia (kü shi)*.—P. med. 14.—Sui lit.

634. 泊宅編 *Po tse pien*, by 方勺 *Fang Cho*. Early part of the 12th cent.—P. 32.—Wylie 157.

635. 亳州牡丹史 *Po chou Mu tan shi*. A treatise on the *Mu tan* flower (*Pæonia Moutan*) of *Po chou* (An hui), by *Sie Feng siang* (see No. 530).—S. K. CXVI. 32.—Reprinted in the Ch. descr. part XI. 86 and T. CCLXXXVIII.

636. 博濟方 *Po tsi fang*, by 王袞 *Wang Kun*. Sung dyn.—P. med. 14.—S. K. K. X. 7.

637. 博物志 *Po wu chi*. Records of remarkable objects, by 張華 *Chang Hua*, A. D. 232—300, a native of 范陽 *Fan yang* (near the present Peking).—Biogr., *Tsin shu* 36.—P. 25.—Reprinted in the H. W.—Mayers 16.—Wylie 153.

638. Same title. Author 唐蒙 *T'ang Meng*. *Tsin dyn.*—P. 28.—S. K. CXLII. 42.

639. *Po ya*. See No. 383.

640. 構欄菌 *Po lo kien*. An article on wild Silk produced from Oak trees. Last cent.—Reprinted in the Ch'eng te fu chi (see p. 88). See my article on Chinese silkworm trees, p. 7.

641. *Pu Pi t'an*. See No. 510.

642. 普濟方 *P'u tsi fang*, by *Chu Siao* or *Chou ting wang* (see p. 49).—P. med. 17.—Wylie 80.

643. *Rh ya*. See p. 34.

644. *Rh ya cheng i*. See p. 37.

645. *Rh ya i*. S. p. 37.

646. 塞上方 *Sai shang fang*.—P. med. 14.—Sung lit.

647. 三輔黃圖 *San fu huang t'u*. A description of the public buildings in Ch'ang an, the ancient metropolis during the Han. Author unknown.—P. 30.—Wylie 35.—It is reprinted in the H. W. collection and is quoted in the *Nan fang ts'ao mu ch'uang* (q. v.).

648. 三輔故事 *San fu ku shi*. Historical memoranda relating to the capital of the Han, written during the Tsin dyn.—P. 30.—Reprinted in the H. W.

649. 三峽記 *San Hsia ki*. Account of the three great River Defiles. See Mayers p. 296.—Quoted in the *T'ai p'ing kuang ki* (q. v.).—A work with the same title was compiled in the Ming period (see *Yu ming shan ki*).

650. 三國志 *San kuo chi*. Memoir of the three kingdoms. A. D. 220—280, by 陳壽 *Ch'en Shou*. A. D. 233—297.—P. 23.—Wylie 13.

651. 三柳軒雜識 *San liu hien tsa shi*. Sung dyn.—S. Y.—Reprinted in the W. P.

651a. 三茅真君傳 *San Mao chen kün ch'uan*. The story of *San Mao*, a Taoist Saint, who attained immortality, in the 3rd cent. B. C., according to the *Shen sien ch'uan* (No. 694). The reputed *Kou kü* mountain (see note 12a), called also *Mao shan*, derives its name from this Saint.—P. 24.

652. 三蘇文集 *San Su wen tsi*. Writings of the three *Su*.—P. 38.—Mayers p. 301 (55).—The three *Su* are 蘇洵 *Su Sün*, and his sons 蘇軾 *Su Shi* (died 1101), and 蘇轍 *Su Chi* (died 1112).

653. 三才圖會 *San ts'ai t'u hui*. A comprehensive cyclo-pædia, illustrated by numerous wood-cuts, by 王圻 *Wang K'ei*. Published in 1607.—Wylie 149.—The botanical section of the work has little value, the accounts and drawings given of the various plants being generally incorrect.
654. 三齊畧記 *San ts'i lio ki*. Tsin dyn.—Reprinted in the W. P.
655. 三秦記 *San Ts'in ki*. On the three divisions of the State of Ts'in (Mayers p. 303), by 辛氏 *Sin (shi)*. 5th cent.—P. 32.—S. Y.—Quoted in the Ts'i min yao shu (q. v.).
656. 三都賦 *San tu fu*. A panegyric on the three capitals of the three kingdoms, 吳 *Wu*, 蜀 *Shu*, and 魏 *Wei*, by 左思 *Tso Sz'*. 3rd cent.—Biogr., Tsin shu 92.—P. 36.—S. Y.
657. 三洞珠囊 *San tung chu nang*. A Taoist work, by 王懸河 *Wang Hsuan ho*.—P. 35.—T. P.
658. 三因方 *San yin fang*, by 陳言 *Ch'en Yen*, or 陳無擇 *Ch'en Wu tse*. Sung dyn.—P. med. 17.—Tung i pao kien 5.—S. K. K. X. 11.
659. 三餘贅筆 *San yü chui pi*. Ming dyn.—S. K. CXXVII. 14.
660. 三餘帖 *San yü tien*. Sung dyn. (?)—T.
661. 三元延壽書 *San yüan yen shou shu*, by 李鵬飛 *Li P'eng fei*, or 李廷飛 *Li Ting fei*. Yüan dyn.—Biogr., Yüan shi 197.—P. med. 20.—H. K. II. 30.
662. 沙州記 *Sha chou ki*. Records of Sha chou (Kan su), by 段國 *Tuan Kuo*.—Quoted in the T. P. (10th cent.).
663. *Shan hai king*. See p. 37.
664. 山家清供 *Shan kia ts'ing kung*, by 林洪 *Lin Hung*. Sung dyn.—P. 34.—S. Y.
665. 山谷刀筆 *Shan ku tao pi*. Writings of *Huang Ting kien* (see No. 202).—P. 38.—S. K. CLXXIV. 33.
666. 山居錄 *Shan kü lu*, by 王旻 *Wang Min*.—P. 33.—W. II. CCXVIII. 3.—12th cent. or earlier.
667. 山居四要 *Shan kü sz' yao*. Apparently a work on agriculture, by 蔡汝懋 *Ts'ai Ju mou*. Ming dyn.—P. 33.—H. K. II. 35.
668. *Shan si t'ung chi*. See p. 88.

669. 山堂考索 *Shan t'ang k'ao su*, by 章俊卿 *Chang Tsun k'ing*. Sung dyn.—P. 36.—S. K. K. XIV. 6.
670. 山堂肆考 *Shan t'ang sz' k'ao*. A. D. 1595.—Wylie 150.
671. *Shan tung t'ung chi*. See p. 88.
672. 剛繁方 *Shan fan fang*, by 謝士泰 *Sie Shi t'ai*.—P. med. 14.—Sui lit.
673. *Shan fan pen ts'ao*. See p. 45.
674. 膳夫錄 *Shan fu lu*, by 鄭望之 *Cheng Wang chi*. Sung dyn.
675. 傷寒直格 *Shang han chi ko*, by *Liu Ho kien* (see No. 812).—P. med. 21.—Tung i pao kien 6.
676. 傷寒類要 *Shang han lei yao*, by 平堯卿 *P'ing Yao k'ing*. Sung dyn.—P. med. 14.—W. H. CCXXIII. 13.
677. 傷寒六書 *Shang han liu shu*, by 陶華 *T'ao hua*. Ming dyn.—P. med. 21.—Tung i pao kien 6.
678. 傷寒論 *Shang han lun*. A medical work on Fever, by *Chang Chung king*. Han dyn.—See note 12 (5).—P. med. 13.
679. 傷寒明理論 *Shang han ming li lun*, by 成無已 *Ch'eng Wu ki*. Kin dyn.—P. med. 21.—Tung i pao kien 6.
680. 傷寒身驗方 *Shang han shen yen fang*, by 王珉 *Wang Min*. Tsin dyn.—Biogr., Tsin shu 65.—P. med. 14.
681. 傷寒書 *Shang han shu*, by 韓祇和 *Han Chi ho*. Sung dyn.—P. med. 21.—S. K. K. X. 8.
682. 傷寒總病論 *Shang han tsung ping lun*, by 龐安時 *P'ang An shi*, a celebrated physician of the Sung period.—Biogr., Sung shi 462 —P. med. 21.—S. K. K. X. 8.
683. 傷寒蘊要 *Shang han yün yao*, by 吳綬 *Wu Shou*. Ming dyn.—P. med. 21.
684. 尚書注疏 *Shang shu chu shu*. The Shang shu (the same as the Shu king, see p. 33), commented upon by 孔安國 *K'ung An kuo*. 2nd cent. B. C.—P. 23.—Mayers 323.
685. 芍藥譜 *Shao yao pu*. A treatise on the Shao yao flower (*Pæonia albiflora*), by 劉攽 *Liu Pin*, liter. name 貢父 *Kung fu*. First half of the 11th cent.—Biogr., Sung shi 319.—P. 28.—Reprinted in the T. CXV.—See also below No. 1067.
686. 召堯夫集 *Shao Yao fu tsi*. Writing of 召雍 *Shao Yung*, liter. name *Yao fu*. A. D. 1011—1077.—P. 39.—Mayers 594.

687. 攝生妙用方 *She sheng miao yung fang*. Hygienic prescriptions, by 張時徹 *Chang Shi ch'e*. Ming dyn.—P. med. 21.—S. K. CV. 21.

688. 神異記 *Shen i ki*, by 王浮 *Wang Fou*.—P. 34.—Mentioned in the T. P. (10th cent.), but probably of earlier date.

689. 神異經 *Shen i king*. A narrative treating of marvellous things and countries, by Tung fang So (see No. 464).—P. 25.—Wylie 153.—Reprinted in the H. W.

690. 神醫普救方 *Shen i pu kiu fang*.—P. med. 20.—S. Y. (Sung authors).

691. *Shen nung Pen ts'ao king*. See p. 27.

692. 神農食忌 *Shen nung shi ki*. Dietetics of the Emperor Shen nung (noxious food).—P. med. 15.—Sui lit.

693. 神農食經 *Shen nung shi king*. Emperor Shen nung's rules regarding food. See No. 710.

694. 神仙傳 *Shen sien ch'uan*. Biographies of Taoist Immortals, by *Ko Hung* (see No. 579).—P. 24.—Wylie 175.—Reprinted in the H. W.

695. 神仙服食方 *Shen sien fu shi fang*. Taoist dietetic prescriptions, by *Ko Hung* (see No. 579).—P. med. 15.—Sui lit.

696. 神仙服食經 *Shen sien fu shi king*. Taoist dietetics.—P. med. 15.—Sui lit.—Quoted in the *Ts'i min yao shu* (q. v.).

697. 神隱書 *Shen yin shu*. A Taoist work, by *K'ü sien* (see p. 53). Ming dyn.—P. 34.—S. K. CXLVII. 39.

698. *Shen si t'ung chi*. See p. 89.

699. 聖濟總錄 *Sheng tsi tsung lu*. Beginning of the 12th cent.—P. med. 15.—S. K. K. X. 8.

700. 聖祖御製幾暇格物編 *Sheng Tsu yü chi ki hia ko wu pien*. Observations of the Emperor K'ang hi (1662—1723) relating to natural history. Frequently quoted in modern Chinese works on botany. It is comprised in the Collection of K'ang hi's Memoirs 聖祖御製文集 *Sheng Tsu yü chi wen tsi* (S. K. K. XVIII. 45.—Wylie 189), and has been translated into French by Father Cibot. See *Mémoires conc. les Chinois* IV. p. 450.

701. 勝金方 *Sheng kin fang*.—P. med. 14.—Sui lit.

702. 澗水燕談錄 *Sheng shui yen t'an lu*. Close of the 11th cent.—Wylie 156.

703. 升庵集 *Sheng an tsi*, by 楊慎 *Yang Shen*. A. D. 1488—1559.—P. 39.—S. K. K. XVIII. 31.—Mayers 894.

704. *Sheng king fu*. See No. 1117.

705. *Sheng king t'ung chi*. See p. 88.

706. 食治通說 *Shi chi t'ung shuo*, by 婁居中 *Lou Kū chung*. Sung dyn.—P. med. 16.—W. H. CCXXIII. 7.

707. 食醫心鏡 *Shi i sin king*, by *Tsan Yin* (see No. 12). T'ang dyn.—P. med. 15.

708. 食忌 *Shi ki*. On dietetics (noxious food), by *Sun Sz' mo* (see p. 43).—P. med. 13.

709. *Shi kien pen ts'ao*. See p. 54.

710. 食經 *Shi king*. There are several works treating of food and bearing this title. One is attributed to the Emperor Shen nung. See No. 693.

Another is by *Huai nan wang* (see No. 193).—P. sub *Shi sing pen ts'ao* (see p. 46).

Another by 崔浩 *Ts'ui Hao*.—P. l. c.—Sui lit.

Another by 竺暄 *Chu Hūan*.—P. l. c.

Another by 李氏 *Li (shi)*.—P. med. 16.

The *Shi king* (I am not aware which of the above) is frequently quoted in the *Ts'i min yao shu* (q. v.).

711. *Shi liao pen ts'ao*. See p. 45.

712. *Shi sing pen ts'ao*. See p. 46.

713. *Shi nu pen ts'ao*. See p. 53.

714. 詩學大成 *Shi hio ta ch'eng*, by 毛直方 *Mao Chi fang*. End of the 13th cent.—P. 32.—Sh. Y.—H. K. VII. 36.

715. 詩話 *Shi hua*, by 王直方 *Wang Chi fang*. End of the 11th cent.—W. H. CCXCIX. 22.—See also No. 902.

716. 詩話總龜 *Shi hua tsung kui*. Sung dyn.—S. K. K. XX. 3.

717. *Shi king*. See p. 33.

718. 事類賦 *Shi lei fu*, by 吳淑 *Wu Shu*. Close of the 10th cent.—P. 36.—Wylie 146.

719. 事林廣記 *Shi lin kuang ki*, by 陳元靚 *Ch'en Yüan tsing*. Sung dyn.—P. 34.—Wylie 34.

720. 事詞類奇 *Shi ts'z' lei k'i*. Ming dyn.—S. K. CXXXVIII. 10.

721. 事文類聚 *Shi wen lei tsü*, by 祝穆 *Chu Mu*. Sung dyn.—P. 31.—S. K. CXXXV. 36.

722. 事物紀原 *Shi nu ki yüan*. A record of the origin of affairs and things, by 高承 *Kao Ch'eng*. Sung dyn.—P. 32.—S. K. K. XIV. 3.

723. *Shi yen yao yüan*. See p. 135.

724. 十洲記 *Shi chou ki*, or 海內十洲記 *Hai nei shi chou ki*. A fabulous description of ten insular kingdoms, by *Tung Jang So* (see No. 464).—P. 30.—Wylie 153.—Reprinted in the W. P.

725. 十道志 *Shi tao chi*. Topography of the ten provinces (tao) into which China was divided in the 7th cent. Author 梁載言 *Liang Tai yen*. Close of the 9th cent.—W. H. CCIV. 3.

726. 十全博救方 *Shi ts'üan po kiu fang*, by 劉甫 *Liu Fu*.—P. med. 15.—Sung lit.

727. 十藥神書 *Shi yao shen shu*, by 葛可久 *Ko K'o kiu*. Ming dyn.—His biography is given in the *I lin* (No. 233).—P. med. 21.—H. K. VI. 47.

728. 世本 *Shi pen*. Ancient historical records from the Emperor Huang Ti down to Nan Wang, written towards the end of the Chou dynasty. *Sze ma Ts'ien*, the author of the *Shi ki* (2nd cent. B. C.), made use of this work.—P. 30.—Han lit.

729. 世說 *Shi shuo*. A collection of minor incidents from the Han to the Tsin, by 劉義慶 *Liu I k'ing*. 5th cent.—P. 30.—Wylie 151.

730. 使西域記 *Shi Si yü ki*. Journal of an Embassy to Western Asia in 1258 A. D., by 劉郁 *Liu Yu*.—P. 31.—See my Notes on Chin. mediæv. travellers, p. 57.

731. 使西域記 *Shi Si yü ki*. Account of an Embassy to Western Asia, by 陳誠 *Ch'en Ch'eng*, in 1415.—S. K. LXIV. 5.—H. K. V. 21.—See my notes on this journey in "China Review" IV. 314.

732. 石湖集 *Shi hu tsi*, by *Fan Ch'eng ta* (see No. 388).—P. 39.—Wylie 202.

733. 石林燕語 *Shi lin yen yü*, by *Ye Meng te* (see No. 608).—S. K. K. XIII. 20.

734. 釋名 *Shi ming*. An ancient explanation of words, by 劉熙 *Liu Hi*. Post. Han dyn.—P. 28.—S. K. K. IV. 16.—Reprinted in the H. W.

735. 尸子 *Shi tsz'*. Writings of 尸佼 *Shi Kiao*, a philosopher about 280 B. C.

736. 拾遺記 *Shi i ki*. A record of matters omitted in the annals of the empire, by 王嘉 *Wang Kia*, liter. name 子年 *Tsz' nien*. 4th cent.—Biogr., *Tsin shu* 95.—P. 24.—Wylie 154.—Reprinted in the H. W.

737. 試效 *Shi hiao*, by *Tung Yüan* (see p. 48).—P. med. 16.

738. 是齋指迷方 *Shi chai chi mi fang*, by 王臈 *Wang Huang*. Sung dyn.—P. med. 17.—S. K. K. X. 9.

739. 士農必用 *Shi nung pi yung*. A treatise on Agriculture. Ming dyn., perhaps Yüan dyn.—Frequently quoted in the *Nung cheng ts'üan shu* (q. v.).

740. 史記 *Shi ki*. Historical Record by the celebrated historiographer 司馬遷 *Sze ma Ts'ien*. B. C. 163—85.—P. 23.—Wylie 14.—Mayers 660.

741. 壽親養老書 *Shou ts'in yang lao shu* (the first character is sometimes replaced by 奉 *Feng*), by 陳直 *Ch'en Chi*. Sung dyn.—P. med. 20.—S. K. K. X. 7.

742. 壽域神方 *Shou yü shen fang*, by *K'ü sien* (see p. 53).—P. med. 20.

743. *Shou shi t'ung k'ao*. See p. 84.

744. 獸經 *Shou king*. A treatise on Quadrupeds, by 黃省曾 *Huang Sheng ts'eng*. Ming dyn.—P. 28.—Wylie 121.

745. 蜀志記 *Shu chi ki*. A description of Shu (the present Sz' ch'uan).—Quoted in the *Ts'i min yao shu* (q. v.).

746. 蜀中廣記 *Shu chung kuang ki*. This seems to be an account of the province of Sz' ch'uan. Author 曹學 *Ts'ao Hio*. Ming dyn.—S. K. K. VII. 26.

747. 蜀記 *Shu ki*.—Quoted in the *Ts'i min yao shu* (q. v.).

747a. *Shu Pen ts'ao*. See p. 46.

748. 蜀地志 *Shu ti chi*.—P. 31.—Perhaps the same as the 蜀志 *Shu chi* mentioned in the Sui lit.

749. *Shu tu fu*. See No. 656.

750. 蜀王本紀 *Shu wang pen tsi*. Ancient historical records of Shu (Sz' ch'uan), by *Yang Hiung* (see No. 106), who was a native of Shu.—S. Y.—T. P.

751. 述征記 *Shu cheng ki*, by 郭緣生 *Kuo Lii sheng* of the Liu Sung dyn. (5th cent.).—P. 34.—S. Y.—Sui lit.

752. 述異記 *Shu i ki*. A collection of notes on the Wonderful, by 任昉 *Jen Fang*. Beginning of the 6th cent.—P. 34.—But the work now extant with this title has additions of later date and is not the original.—Wylie 154.

The P. l. c. quotes another work with the same title, which is the production of 祖冲之 *Tsu Ch'ung chi*, who lived in the 5th cent.—His biogr. Nan 'I's'i shu 52.—S. K. CXLII. 43.

753. *Shu king*. See p. 33.

754. 菽園雜記 *Shu yüan tsa ki*, by 陸文量 *Lu Wen liang*, or 陸容 *Lu Yung*. Ming dyn.—P. 36.—S. Y.—Reprinted in the W. P.

755. 雙槐歲鈔 *Shuang huai sui ch'ao*. Ming dyn.—S. K. CXLIII. 16.

756. 水經 *Shui king*. The Water Classic, a work on the rivers of China, by 桑欽 *Sang K'in*. Beginning of the Christian era.—Reprinted in the H. W.—It has been commented upon by 龐道元 *Li Tao yüan* in the 5th cent.—Biogr. Wei shu 89.—P. 29.—Wylie 43.

757. 水南翰記 *Shui nan han ki*, by 李貫 *Li Kuan*. Ming dyn.—H. K. V. 18.

758. 水東日記 *Shui tung ji ki*, by 葉盛 *Ye Sheng*. 15th cent.—P. 32.—Wylie 159.

759. 水雲錄 *Shui yün lu*, by *Ye Meng te* (see No. 608). Sung dyn.—P. 33.—A work with the same title by *Yang P'u* of the Ming is noticed in the S. K. CXXX. 4.

760. 瑞竹堂經驗方 *Shui chu t'ang king yen fang*. A collection of medical prescriptions, by 薩謙齊 *Sa k'ien ts'i*.—P. med. 18.—In the S. K. K. X. 14 the name of the author reads 薩理彌實 *Sa li mi shi* (probably a Mongol name). First half of the 14th cent.

761. 瑞應圖記 *Shui ying t'u ki*, by 孫柔之 *Sun Jou chi*. Liang dyn.—P. 33.—Sui lit.—W. H. CCXIV. 4.

A work with the title *Shui ying t'u*, by 庾溫 *Yü Wen*, published towards the end of the 5th cent., is noticed in the S. Y.

762. 說郭 *Shuo fu*, by 陶宗儀 *T'ao Tsung i*, liter. name 九成 *Kiu ch'eng*. Yüan dyn., or early in the Ming.—P. 31.—Wylie 136.—Mayers 712.

763. 說文解字 *Shuo wen kie tsz'*. An ancient dictionary of the Chinese characters, by 許慎 *Hü Shen*. Close of the first cent. The work was laid before the Emperor An Ti A. D. 121. A commentary upon it was written by 徐鍇 *Sü K'iai* of the T'ang.—P. 27.—Wylie 8.—Mayers XXIII.—S. K. K. IV. 19.

764. 說文字原 *Shuo wen tsz' yüan*. On the origin of the Chinese characters, by *Chou Pi* (see No. 474).—P. 27.—But the S. K. K. IV. 22 attributes the work to *Chou Po k'i* (see No. 474).

765. 說苑 *Shuo yüan*. A collection of anecdotes from ancient Chinese History, by *Liu Hiang* (see No. 211).—P. 35.—S. K. K. IX. 2.—Reprinted in the H. W.

766. 西河舊事 *Si ho kiu shi*. Records relating to Si ho (Fen chou fu, Shan si).—Mentioned in the T'ang lit., but seems to date from an earlier period.

767. 西湖志 *Si hu chi*. Description of the Si hu lake near Hang chou fu, by 田汝成 *T'ien Ju ch'eng*. Ming dyn.—P. 32.—S. K. K. VII. 19.

768. 西溪叢語 *Si k'i ts'ung yü*, by 姚寬 *Yao K'uan*. Middle of the 12th cent.—P. 36.—Wylie 128.

769. 西京雜記 *Si king tsa ki*. A record of incidents at Ch'ang an, the Chinese metropolis during the Han, by 劉歆 *Liu Hin*, who lived about our era.—Reprinted in the H. W.—Others believe that *Ko Hung* (see note 12 [8]) was the author of it.—The S. K. K. ascribes the authorship of the work to *Wu Kün* (see No. 806).—Quoted in the Ts'i min yao shu (q. v.).—P. 31.—Wylie 151.

770. 西樵野記 *Si ts'iao ye ki*, by 侯甸 *Hou Tien*. Ming dyn.—P. 35.—S. K. CXLIV. 10.

771. 西域諸國志 *Si yü chu kuo chi*. Account of Western countries. 5th cent., perhaps earlier.—Quoted in the Ts'i min yao shu (q. v.).—T. P.

772. 西域記 *Si yü ki*. Account of the countries of the West, by the Buddhist monk 元奘 *Yüan Chuang* (or 玄奘 *Hüan Ts'ang*). First half of the 7th cent.—Translated by Stan. Julien.
773. *Si yü t'u chi*. See p. 95.
774. 席上腐談 *Si shang fu t'an*. A Taoist work, by 俞琰 *Yü Yen*. Sung dyn.—P. 37.—S. K. K. XIV. 46.—Reprinted in the W. P.
775. 席延賞方 *Si Yen shang fang*. Medical prescriptions, by *Si Yen shan*.—P. med. 13.—Sung lit.
776. 湘中記 *Siang chung ki*. (Ancient *Siang* in the present Hu nan). Tsing dyn.—W. H. CCVI. 2.—Reprinted in the W. P.
777. 湘山野錄 *Siang shan ye lu*. Sung dyn.—S. K. K. XIV. 20.
778. 相貝經 *Siang pei king*, by 朱仲 *Chu Chung*. Han dyn.—P. 28.—H. K. III. 45.—Mayers 82 (?).—Reprinted in the H. W.
779. 橡繭識語 *Siang kien shi yü*. On wild Silk produced from Oaks. Present dyn.—See my article on Chinese Silkworm trees, p. 7.
780. 襄沔記 *Siang Mien ki*.—P. 32.—T'ang lit.
781. 小品方 *Siao p'in fang*, by 陳延之 *Ch'en Yen chi*.—P. med.—Sui lit.
782. 小兒真訣 *Siao rh chen küe*, by 錢乙 *Ts'ien I*, liter. appellation 仲陽 *Chung yang*, Court physician. Close of the 11th cent.—Biogr. Sung shi 462.—P. med. 21.—Wylie 84.—Tung i pao kien 5.
783. 小兒方 *Siao rh fang*. Medical prescriptions against infantile complaints, by 張煥 *Chang Huan*.—P. med. 22.—Sung lit.
784. 小爾雅 *Siao Rh ya*. A dictionary similar to the *Rh ya* (q. v.), by 孔鮒 *K'ung Fu*, a descendant of Confucius, known also under the name of 孔叢子 *K'ung ts'ung tsz'*. He lived about B. C. 212.—P. 28.—Han. lit.—S. K. XLIII. 1.—The *Siao rh ya*, reprinted in the H. W., was commented upon by 李軌 *Li Kui* of the Han.
785. 仙傳方 *Sien ch'uan fang*. Taoist medical prescriptions, by 張三丰 *Chang San feng*. Beginning of the 15th cent.—P. med. 19.—Ming lit.

786. 新論 *Sin lun*. New reflections, by 陸賈 *Lu Kia*, about 200 B. C.—Reprinted in the H. W.—Mayers 437.

There are several works bearing the same title. The S. Y. notices a *Sin lun* by 桓譚 *Huan T'an*. First cent. A. D.—The H. W. reproduces besides Lu Kia's work a *Sin lun* by 劉勰 *Liu Hie*. Liang dyn.

787. 新書 *Sin shu*. Essays on the Confucian doctrine, by 賈誼 *Kia I*, born ca. 200 B. C.—P. 35.—Wylie 67.—Mayers 245.—Reprinted in the H. W.

788. 心法 *Sin fa*. A medical (Taoist) work, by *Tan K'i* (see p. 49).—P. med. 17.—Tung i pao kien 6.

The P. quotes ibidem a discussion on Tan Ki's *Sin fa* by 程充 *Ch'eng Ch'ung*, and another by 楊珣 *Yang Sün*. Both probably of the Ming.

789. 星槎勝覽 *Sing ch'a sheng lan*. An account of peregrinations at sea, by 費信 *Fei Sin*. A. D. 1436.—P. 30.—Ming lit.

790. 性理大全 *Sing li ta ts'üan*. A collection of philosophical works. A. D. 1415.—P. 34.—Wylie 69.

791. 修真秘旨 *Siu chen pi chi*. A Taoist work. Sung dyn.—P. 26.—T. P.

792. 修真秘訣 *Siu chen pi küe*. A Taoist work, by 穎陽子 *Ying Yang tsz'*.—P. 26.—Sung lit.

793. 神珍方 *Siu chen fang*, by *Chou ting wang* (see p. 49).—P. med. 18.

794. 神珍小兒方 *Siu chen siao rh fang*, by 徐用宣 *Sü Yung süan*. Ming dyn.—P. med. 22.—S. K. CV. 16.

795. 瑣碎錄 *So sui lu*.—P. 37.—Author 溫革 *Wen K'o*. Sung dyn.—W. H.—The S. Y. gives as author of the work 陣日華 *Ch'en Ji hua* of the Sung.

796. 搜神記 *Sou shen ki*. A collection of legends, by 于寶 *Yü Pao*, who wrote about A. D. 320.—P. 24.—Wylie 154.—Reprinted in the H. W.

The 搜神後記 *Sou shen hou ki* is a continuation of the preceding by 陶潛 *T'ao Ts'ien*. A. D. 365—427.—Wylie l. c.—Mayers 713.

797. 蘇沈良方 *Su Ch'en liang fang*. Collection of famous recipes, by *Ch'en Kua* (see No. 510), with additional matters by *Su Tung p'o* (see No. 991).—P. med. 15.—Wylie 78.

798. *Su chou fu chi*. See p. 89.

799. 蘇黃手簡 *Su Huang shou kien*. Writings of *Su Shi* (see No. 991) and *Huang T'ing kien* (see No. 202).—P. 38.—Mayers 620.

800. 溯洄集 *Su hui tsi*, by 王履 *Wang Li*. Second half of the 14th cent.—P. med. 18.—Wylie 80.

801. 續漢書 *Sü Han shu*. Appendix to the Han histories, by 謝承 *Sie Ch'eng*. Period of the three kingdoms.—P. 30.—S. Y.

802. *Sü Pi t'an*. See No. 510.

803. 續博物志 *Sü Po wu chi*. A supplement to the *Po wu chi* (see No. 637), by 李石 *Li Shi*. Middle of the 12th cent.—P. 28.—Wylie 154.

804. 續水經 *Sü Shui king*. A supplement to the *Shui king* (see No. 756), by 陸禔 *Lu Yin*. T'ang dyn.—P. 30.—S. Y.

805. 續搜神記 *Sü Sou shen ki*, by 陶 *T'ao*.—P. 35.—I think this is the same as the *Sou shen hou ki* (see No. 796).

The S. Y. quotes a *Sü Sou shen ki* of the Wu tai period.

806. 續齊諧記 *Sü Ts'i hiai ki*. A supplement to the *Ts'i hiai ki* (see No. 927), by 吳均 *Wu Kün* of the Liang dyn.—Reprinted in the H. W.—P. 24.—Wylie 154.

807. 續韻府群玉 *Sü Yün fu k'ün yü*. Supplement to the dictionary *Yün fu k'ün yü* (see No. 1141), by 包瑜 *Pao Yü*. Ming dyn.—P. 27.—S. K. CXXXVII. 29.

808. 徐文伯方 *Sü Wen po fang*. Medical prescriptions of *Sü Wen po*, a celebrated physician in the middle of the 5th cent.—P. med. 13.—Sui lit.—Biogr. Nan shi 52.

809. 宣政錄 *Süan cheng lu*, by 江萬里 *Kiang Wan li*. Sung dyn.—P. 26.—H. K. III. 10.—Biogr. Sung shi 418.

810. *Süan hua hien chi*. See p. 88.

811. 宣和北苑貢茶錄 *Süan ho Pei yüan kung ch'a lu*. An account of the preparation of tea in Kien an (the present prefecture Kien ning fu, Fu chou), by 熊蕃 *Hsiung Fan*. Sung dyn.—S. K. K. XII. 21.

812. 宣明方 *Süan ming fang*, by 劉完素 *Liu Huan su*, a celebrated physician of the Kin.—Biogr. Kin shi 131.—He was a native of Ho kien.—P. med. 16 styles him 劉河閒 *Liu Ho kien*.—Tung i pao kien 6.

813. 隋煬帝開河記 *Sui Yang Ti K'ai ho ki*.—P. 33.—Sung lit.—Probably a memoir on the Yellow River, referring to the time of the Emperor Yang Ti of the Sui (A. D. 605—617).

814. 隋書 *Sui shu*. History of the Sui dynasty, A. D. 589—618, by 魏徵 *Wei Cheng*. 7th cent.—P. 23.—Wylie 13.

815. 隨身備急方 *Sui shen pei ki fang*, by 張文仲 *Chang Wen chung*.—Biogr. T'ang shu 204.—P. med. 13.—T'ang lit.

816. 遜志齋集 *Sun chi chai tsi*, by 方孝孺 *Fang Hiao ju*. Ming dyn.—P. 38.—S. K. K. XVIII. 13.

817. 筍譜 *Sün pu*. Treatise on Bamboo sprouts, by the Buddhist priest *Tsun ning* (see No. 67).—Wylie 122.—Reprinted in the T. CLXXXVII.

818. 荀子 *Sün tsz'*. A philosophical work, by 荀況 *Sün K'uang*. 3rd cent. B.C. Commented upon by 楊倞 *Yang Liang*. T'ang dyn.—P. 23.—Wylie 66.—S. K. K. IX. 1.

819. 宋史 *Sung shi*. History of the Sung dynasty, A. D. 950—1280, by *T'o t'o* (see No. 455).—P. 30.—Wylie 18.

820. 宋書 *Sung shu*. History of the (Liu) Sung dynasty, A. D. 420—478, by 沈約 *Ch'en Yo*. 5th cent.—P. 23.—Wylie 13.

821. 宋徽宗聖濟經 *Sung Hui Tsung sheng tsi king*. A medical treatise by the Sung Emperor *Hui Tsung*. A. D. 1101—1126.—P. med. 15.—W. H. CCXXII. 7.

822. 宋徽宗詩 *Sung Hui Tsung shi*.—P. 38.—Poems by the same Emperor.

823. 嵩高山記 *Sung kao shan ki*. Account of the Sung kao mountain (see No. 824). 5th or 6th cent.—P. 32.—T. P.

824. 嵩山記 *Sung shan ki*. Account of the Sung mountain (see Appendix 43), by 盧僊 *Lu Hiu*. T'ang dyn.—P. 25.—T'ang lit.

But a treatise with this title existed at an earlier date, as I find it quoted in the Kuang chou ki (q. v.).—The Yu ming shan ki reproduces a *Sung shan ki* of the Ming period.

825. 松窓雜記 *Sung ch'uang tsa ki*, by 李滂 *Li Sün*, styled also 李勣 *Li P'ò*, or 韋滂 *Wei Sün*. First half of the 9th cent.—Biogr. T'ang shu 222.—P. 32.—S. K. K. XIV. 15.

The W. P. reprints an article with the above title. Author 杜荀鶴 *Tu Sün ho*. T'ang dyn.

826. 松漠紀聞 *Sung mo ki wen*. Historical memoranda regarding the Kin dynasty, by 洪皓 *Hung Hao*, A. D. 1090—1155, who was sent on an embassy to the Kin.—Wylie 26.—Mayers 198.—In the P. 33 the name of the author of this narrative reads 洪邁 *Hung Mai*. But this was the son of Hung Hao.

827. *Sz' ch'uan t'ung chi*. See p. 91.

828. *Sz' i kuan*. See p. 95.

829. *Sz' k'u ts'üan shu kien ming mu lu*. See p. 134.

830. *Sz' k'u ts'üan shu tsung mu*. See p. 134.

831. 四民月令 *Sz' min yüe ling* (the second character of the title reads 時 *shì* in some quotations), by 崔寔 *Ts'ui Shi*. After Han.—P. 33.—S. Y.—Apparently a work on agriculture, as can be judged from the quotations in the Ts'i min yao shu.

832. *Sz' sheng pen ts'ao*. See p. 45.

833. 四時類要 *Sz' shì lei yao*. A work on agriculture, quoted in the Nung cheng ts'üan shu (q. v.). Yüan or Ming period.

834. 四時寶鏡 *Sz' shì pao king*. T'ang dyn.—S. Y.

835. *Sz' shì tsuan yao*. See p. 80.

836. *Sz' t'i ts'ing wen kien*. See p. 105.

837. 大康地記 *Ta k'ang ti ki*. Tsin dyn.—S. Y.

838. *Ta Kuan Pen ts'ao*. See p. 47.

839. 大明會典 *Ta Ming hui tien*. Description of the Chinese government during the Ming, published in 1509.—P. 31.—Wylie 56.

840. *Ta Ming I t'ung chi*. See p. 87.

841. *Ta Ts'ing I t'ung chi*. See p. 87.

842. 大業拾遺錄 *Ta Ye shì i lu* (apparently referring to the reign of Ta Ye, 605—607), by 杜寶 *Tu Pao*. T'ang dyn.

The S. K. CXLIII. 4 mentions a work 大業拾遺記 *Ta Ye shì i ki*, by Yen Shi ku (see No. 270).

843. 打棗譜 *Ta tsao pu*. A treatise on Jujubes, by 柳貫 *Liu Kuan*. Yüan dyn.—Biogr. Yüan shi 181.—This treatise is reprinted in the Ch. descr. part XV. 5 and T. CCXXIII.

844. 太和山志 *T'ai ho shan chi*. Description of the *T'ai ho* mountain (see Appendix 48), by 田玉 *T'ien Yü*. Close of the 16th cent.—P. 31.—S. K. LXXVI. 11.—Wylie 44.

845. *T'ai p'ing Huan yü ki*. See p. 86.

846. 太平廣記 *T'ai p'ing kuang ki*. An Encyclopædia similar in character to the next, containing minor articles by the same author (*Lo Shi*).—P. 24.—S. K. K. XIV. 33.

847. 太平御覽 *T'ai p'ing yü lan*. A great Encyclopædia, published by 李昉 *Li Fang*. A. D. 983.—P. 31.—Wylie 146.—See also p. 135.

848. 太白陰經 *T'ai po yin king*. A treatise on military tactics, by 李筌 *Li Ts'üan*. Middle of the 8th cent.—P. 36.—Wylie 73.

849. 太倉公方 *T'ai ts'ang kung fang*. Recipes of *T'ai ts'ang kung*.—See note 12 (4).—P. med. 13.

850. 太清石壁記 *T'ai ts'ing shi pi ki*. A Taoist work.—P. 26.—T'ang lit.

851. 太清草木記 *T'ai ts'ing ts'ao mu ki*.—P. 25.—A treatise of a similar title by *T'ao yin kü* (see p. 43) is noticed in the Sui lit.

852. *T'ai wan fu chi*. See p. 90.

853. 泰山記 *T'ai shan ki*. Account of the celebrated *T'ai* mountain (see Appendix 51). This is occasionally quoted in Chinese botanical works. But there are several records with the above title by authors of the Han, Sung, Ming, etc. See *Yu ming shan ki*.

854. 丹房靈源 *Tan fang kien yüan*. An alchemistic work, by 獨孤道 *Tu Ku t'ao*.—P. 25.—Sung lit.

855. 丹溪心法 *Tan k'i sin fa*, by *Yang Sün* (see No. 788).—P. med. 17.

856. 丹溪心法附錄 *Tan k'i sin fa fu lu*, by 方廣 *Fang Kuang*. Ming dyn.—P. 17.—S. K. CV. 24.

857. 丹溪纂要 *Tan k'i tsuan yao*, by 盧和 *Lu Ho*. Ming dyn. See p. 54.—P. med. 17.

858. 丹砂秘訣 *Tan sha pi küe*, by 張杲 *Chang Kao*. Sung dyn.—P. 29.—The author is noticed S. K. K. X. 10.

859. 丹臺錄 *Tan t'ai lu*, by 青霞子 *Ts'ing Hia tsz'*, a Taoist scholar of the Sung.—P. 25.—W. H. CCXXII. 7.—Sung lit.

860. 丹鉛錄 *Tan yüan lu*, by Yang Shen (No. 703).—P. 33.—Wylie 130.

861. 談圃 *T'an pu*, by 孫升 *Sun Sheng*. Sung dyn.—P. 35.—S. Y.

862. 談藪 *T'an sou*, by 龐元英 *P'ang Yüan ying*. Sung dyn.—P. 35.—S. K. CXLIII. 8.—There are several works with the same title by different authors.

863. 談苑 *T'an yüan*, by 楊億 *Yang I*. Beginning of the 11th cent.—P. 26.—Wylie 147.

864. 坦齋筆衡 *T'an chai pi heng*, by 邢 鼎 *Hing*.—P. 38.—This is apparently the author 邢凱 *Hing K'ai* of the Sung, mentioned by Wylie 130 sub *T'an chai t'ung pien*.

865. 唐會要 *T'ang hui yao*. Compilation of State matters during the T'ang, by 王溥 *Wang P'u*. 10th cent.—P. 30.—Wylie 56.

866. *T'ang Pen ts'ao*. See p. 44.

867. 唐書 *T'ang shu*. History of the T'ang dynasty, A. D. 618—907, by 歐陽修 *Ou yang Siu*. 11th cent.—P. 24.—Wylie 13.—See also p. 134.

868. 唐小說 *T'ang siao shuo*. Miscellaneous narratives referring to the T'ang period.—P. 37.—W. H. CXC. 1. (?)

869. 唐武后別傳 *T'ang Wu Hou pie ch'uan*. Narrative of the Empress Wu of the T'ang, in the latter half of the 7th cent.—P. 24.—Mayers 862.

870. 唐韻 *T'ang yün*. A Dictionary, by 孫愐 *Sun Mien*, published in 750.—P. 27.—“China Review” IV. 340.

871. *T'ang i pen ts'ao*. See p. 48.

872. 得效方 *Te hiao fang*, by 危亦林 *Wei I lin*. A. D. 1337.—P. med. 19.—Wylie 80.

873. 登真隱訣 *Teng chen yin küe*. A Taoist work, by *T'ao yin kü* (see p. 43).—P. 26.

874. 帝京景物畧 *Ti king king wu lio*. A description of Peking. A. D. 1635.—S. K. LXXVII. 23.

875. 帝王世紀 *Ti wang shi ki*. History of the ancient Emperors, by *Huang ju Mi* (see No. 271).

876. 地鏡圖 *Ti king t'u*. Liang dyn., or earlier.—P. 35.—Sui lit.

877. 茗溪漁隱叢話 *T'iao k'ü Yü yin ts'ung hua*, by 胡仔 *Hu Tsz'*. Sung dyn.—P. 37.—S. K. CXCIV. 37.

878. 鐵圍山叢談 *T'ie wei shan ts'ung t'an*, by 蔡條 *Ts'ai T'iao*. First half of the 12th cent.—P. 36.—Wylie 157.

879. 鐵厓集 *T'ie yai tsi*, by 楊維禎 *Yang Wei cheng*. Yüan dyn.—P. 38.—S. K. K. XVII. 30.

880. 滇中茶花記 *Tien chung ch'a hua ki*. A treatise on the Camellia flower of the province of Yün nan, by 馮時可 *Feng Shi k'o*. Ming dyn.—See Yu ming shan ki.

880a. 滇海虞衡志 *Tien hai yü heng chi*. An account of the geographical features, natural productions, etc. of Southern China, especially Yün nan, by 檀萃 *T'an Ts'ui* (see No. 183). Present dyn., second half of the last cent.—T'an Ts'ui appears as the author of a treatise on the Chinese aborigines in the C. T. The Tien hai yü heng chi is frequently quoted in the Ch. with reference to Southern Chinese plants.

881. *Tien hi*. See p. 92.

882. *Tien nan Pen ts'ao*. See p. 75.

883. 滇南雜記 *Tien nan tsa ki*. An account of the province of Yün nan. Beginning of the 17th cent.—S. K. LXXVII. 19.

883a. 滇太華山記 *Tien T'ai hua shan ki*. An account of the T'ai hua mountain in Yün nan (see Appendix 49). Ming dyn.—Yu ming shan ki.

884. 天香傳 *Tien hiang ch'uan*, by 丁謂 *Ting Wei*, who, according to the W. H. CCXXV. 12, was a Taoist author in the beginning of the 11th cent.—P. 26.

885. 天工開物 *Tien kung k'ai wu*. A treatise on Technology, by 宋應星 *Sung Ying sing*. Second edition in 1637.—Stan. Julien has translated many articles from this work.

885a. 天目山志 *Tien mu shan chi*. Description of the T'ien mu mountain (see Appendix 55), by 徐嘉泰 *Sü Kia t'ai*. Beginning of the 17th cent.—S. K. LXXVI. 17.

886. 天寶單方圖 *T'ien Pao tan fang t'u*.—P. med. 13.—I understand that the book was published during the period T'ien Pao. A. D. 742—56.

887. 天彭牡丹譜 *T'ien p'eng Mu tan pu*. A treatise on *Pæonia Moutan*, by 陸游 *Lu Yu*. A. D. 1125—1210.—Mayers

446.—S. K. CXVI. 31.—Reprinted in the Ch. descr. part XI. 73 and T. CCLXXXVII.

888. 天台縣志 *T'ien t'ai hien chi*. Description of the district of T'ien t'ai (Che kiang). Ming dyn.—S. K. LXXIV. 24.

889. 天台山記 *T'ien t'ai shan ki*. An account of the T'ien t'ai mountain (Che kiang, see Appendix 56), celebrated in Chinese Buddhism and Taoism. Author 徐靈府 *Sü Ling fu*, a Taoist priest of the T'ang dyn.—W. H. CCVI. 2.

There are several works with the same title compiled by authors of the Ming. There is also a 天台山志 *T'ien t'ai shan chi* by a Taoist priest of the Yüan.—S. K. LXXVI. 2.

890. *T'ien tsin hien chi*. See p. 88.

891. 田家五行 *T'ien kia wu hing*. Ming dyn.—H. K. II. 35.

892. 程史 *T'ing shi*. Sung dyn.—Reprinted in the W. P.—S. K. K. XIV. 25.

893. 多能鄙事 *To neng pi shi*, by 劉伯溫 *Liu Po wen*, or 劉基 *Liu Ki*. A. D. 1311—1375.—P. 34.—Mayers 409.—S. K. CXXX. 2.

894. 痘疹證治 *Tou chen cheng chi*, by *Li Yen wen* (see No. 258).—P. med. 22.

895. 痘疹管見 *Tou chen kuan kien*, by 高武 *Kao Wu*. Ming dyn.—P. med. 22.—S. K. CV. 30.

896. 痘疹論 *Tou chen lun*. A treatise on Small-pox, by 聞人規 *Wen Jen kui*. A. D. 1323.—P. med. 22.—Wylie 83.

897. 投荒錄 *T'ou huang lu*.—T'ang dyn.—S. Y.

898. 雜錄 *Tsa lu*, by *T'ao yin kü* (see p. 43).—P. 35.

899. 雜俎 *Tsa tsu*. Ming dyn.—S. K. CXXXVII. 40.—But a treatise with this title existed much earlier.

900. *Tsa wu hing shu*. See No. 1049.

901. 雜陰陽書 *Tsa yin yang shu*.—Mentioned in the Han lit.

902. 蔡氏詩話 *Ts'ai shi shi hua*.—P. 39.—The name of the author is 蔡寬夫 *Ts'ai Kuan fu*, or 蔡居厚 *Ts'ai Kü hou*.—Biogr. Sung shi 356.—K. XVIII. 18.

903. *Ts'ai yao lu*. See p. 40.

904. 參同契 *Ts'an t'ung k'i*. A commentary on the I king, giving information on Chinese Alchemy, by 魏伯陽 *Wei Po yang*, a celebrated Taoist philosopher and alchemist, about the middle

of the second cent. — P. 36. — Wylie 175. — Reprinted in the H. W.

905. 倉頡解詁 *Ts'ang Hie kie ku.* — P. 27. — Several treatises with a similar title are noticed in the Han lit — *Ts'ang Hie* is reputed as the inventor of the art of writing, in the mythical period of antiquity. — Mayers 756.

906. 造化指南 *Tsao hua chi nan.* A Taoist work on Alchemy, by 土宿真君 *T'u Su chen kün.* — P. med. 16. — Sung dyn. ? — See also No. 980.

907. 造化權輿 *Tsao hua kuan yü,* by 趙自勗 *Chao Tsz' mien.* T'ang dyn. — P. 37. — W. H. CCXIV. 7.

908. 草花譜 *Ts'ao hua pu.* A treatise on herbaceous garden plants, by 高濂 *Kao Lien.* Ming dyn. Seems to belong to the 17th cent. — Ming lit. — Reprinted in the T. CXXI. and CLXXIII.

909. 草廬集 *Ts'ao lü tsi.* Writings of 吳澄 *Wu Ch'eng.* A. D. 1249—1333. Pseudonym *Ts'ao lü.* — P. 38. — Mayers 859.

910. 草木子 *Ts'ao mu tsz',* by 葉世傑 *Ye Shi kie,* or 葉子奇 *Ye Tsz' k'i.* A. D. 1378. — P. 35. — Wylie 134.

911. 草藥圖 *Ts'ao yao t'u.* Drawings of medicinal plants, by 羅思舉 *Lo Sz' kü.* Present dyn. — Quoted in the Ch.

912. 曹騰傳 *Ts'ao Man ch'uan.* Biography of *Ts'ao Ts'ao,* the founder of the Wei dynasty, died A. D. 220. Written during the San kuo period. — Mayers 3. — T. P.

913. 曹子建集 *Ts'ao tsz' kien tsi.* Writings of 曹植 *Ts'ao Chi,* A. D. 192—232, third son of the great usurper *Ts'ao Ts'ao* (see No. 1024). — P. 37. — Mayers 759. — S. K. K. XV. 3.

914. 集效方 *Tsi hiao fang,* by 閻孝忠 *Yen Hiao chung.* Beginning of the 12th cent. — P. med. 19. — Wylie 84.

915. 集異記 *Tsi i ki.* A historical work, by 薛用弱 *Sie Yung jo.* Early part of the 9th cent. — P. 34. — Wylie 155.

916. 集簡方 *Tsi kien fang.* Medical prescriptions, by 瀕湖 *Pin hu,* or *Li Shi chen* (see p. 54). — P. med. 19. — S. K. K. X. 18.

917. 集事淵海 *Tsi shi yüan hai.* — P. 31. — This is probably the same as the 羣書集事淵海 *K'ün shu tsi shi yüan hai* of the 15th cent. — See S. K. CXXXVII. 30.

918. 集驗方 *Tsi yen fang.* Medical prescriptions, by 梅師 *Mei shi* (see No. 341). — P. med. 14.

919. Same title. Author 姚僧坦 *Yao Seng t'an*. Middle of the 10th cent.—Biogr. Chou shu 47.—P. med. 14.—Tung i pao kien 4.

920. Same title. Author 董炳 *Tung Ping*. 11th cent.—P. med. 19.—Wylie 79.

921. Same title. Author 朱端章 *Chu Tuan chang*.—P. med.—Sung lit.

922. 集韻 *Tsi yün*. A dictionary, by 丁度 *Ting Tu*. Middle of the 11th cent.—P. 27.—Wylie 8, 9.

923. 濟生方 *Tsi sheng fang*, by 嚴用和 *Yen Yung ho*. Sung dyn.—P. med. 17.—S. K. K. X. 11.

924. 濟生拔萃方 *Tsi sheng pan ts'ui fang*. A collection of medical treatises and recipes of famous physicians of the Kin and Yüan periods, by 杜思敬 *Tu Sz' king* of the Yüan or Ming.—P. med. 17.—H. K. VI. 37.

925. 積善堂經驗方 *Tsi shan t'ang king yen fang*, by 萬表 *Wan Piao*, an author of the Ming.—P. med. 18.—S. K. CV. 21.

926. 祭法 *Tsi fa*. A work on Sacrifices, by 盧謨 *Lu Shen*. Tsin dyn.—Biogr. Tsin shu 44.—P. 35.—Sui lit.

927. 齊諧記 *Ts'i hiai ki*. A record of marvels, by *Ch'en Yo* (see No. 820), reproduced in the H. W.—P. 24.—Wylie 154.—See also No. 806.

928. *Ts'i min yao shu*. See p. 77.

929. 齊地記 *Ts'i ti ki*. An account of ancient Ts'i (in Western Shan tung), by 伏琛 *Fu Ch'en*. 5th cent. or earlier.—P. 32.—S. Y.

930. 齊東野語 *Ts'i tung ye yü*, by *Chou Mi* (see No. 48).—P. 31.—Wylie 133.

931. 七錄 *Ts'i lu*, by 阮孝緒 *Yüan Hiao sü*, died 537.—Biogr. Liang shu 51.—Sui lit.

932. 焦希程集 *Tsiao Hi ch'eng tsi*. Writings of *Tsiao Hi ch'eng*. 16th cent.—P. 39.—S. K. LIII. 35.

933. 椒宮舊事 *Tsiao kung kiu shi*, by 王達 *Wang Ta*. Ming dyn.—H. K. III. 26.

934. 千金翼方 *Ts'ien kin i fang*. Medical prescriptions, by *Sun Sz' mo* (see p. 43).—P. med. 13.

935. 千金備急方 *Ts'ien kin pei ki fang*. Same author.—P. l. c.

936. 千金髓方 *Ts'ien kin sui fang*. Same author.—P. 1. c.
937. 千金月令方 *Ts'ien kin yue ling fang*. Same author.—P. 1. c.
938. *Ts'ien kin shi chi*. See p. 43.
939. 錢起詩集 *Ts'ien K'i shi tsi*. Poems of *Ts'ien K'i*. Middle of the 8th cent.—P. 38.—Sh. Y.
940. 錢神論 *Ts'ien shen lun*, by 魯褒 *Lu Pao*. Tsin dyn.—Biogr. Tsin shu 94.—P. 37.
941. 前漢書 *Ts'ien Han shu*. History of the Former Han, 202 B. C.—25 A. D. Author 班固 *Pan ku*; died A. D. 92.—P. 23.—Wylie 13.
942. 前涼錄 *Ts'ien liang lu*. Tsin dyn., according to T.
943. 潛溪集 *Ts'ien k'i tsi*, by 宋景濂 *Sung King Lien*, styled also *Sung Lien*. A. D. 1310—1381.—P. 38.—Mayers 639a.—H. K. III. 74.
944. 晉中興書 *Tsin chung hing shu*, by 河法盛 *Ho Fa ch'eng*. 5th or 6th cent.—P. 25.—S. Y.
945. 晉宮閣名 *Tsin kung ho ming*. Description of the palaces of the Tsin, written during that dynasty.—S. Y.
946. 晉書 *Tsin shu*. History of the Tsin dynasty, A. D. 265—420, by 王隱 *Wang Yin* of the same dyn.—P. 23.—S. Y.
- The Tsin shu in its present form was compiled in the 7th cent. by 房喬 *Fang K'iao*.—Wylie 15.
947. 秦承祖藥方 *Ts'in Ch'eng tsu yao fang*. Medical prescriptions of *Ts'in Ch'eng tsu*. Tsin dyn.—P. med. 13.—Sui lit.—T. P.
- The Sui lit. notices also a work 秦承祖本草 *Ts'in Ch'eng tsu Pen ts'ao*, and several other medical works by the same author.
948. 秦穆公傳 *Ts'in Mu kung ch'uan*. An ancient narrative of the Duke Mu of Ts'in, in the 7th cent. B. C.—P. 24.—Reprinted in the H. W.—Mayers 547.
949. 秦子 *Ts'in tsi*. Writings of 秦菁 *Ts'in Tsing* of the Kingdom of Wu. Period of the three Kingdoms.—Sui lit.
950. 清異錄 *Ts'ing i lu*, by 陶穀 *T'ao Ku*. Wu tai and Sung periods.—S. K. K. XIV. 35.
951. 清波雜誌 *Ts'ing po tsa chi*. Sung dyn.—S. K. K. XIV. 24.

952. 清城山記 *Ts'ing ch'eng shan ki* (see Appendix 58), by the Taoist priest *Tu Kuang t'ing* (see No. 492).—W. H. CCVI. 1.

952a. 青囊雜纂 *Ts'ing nang tsa tsuan*, by 邵真人 *Shao (chen jen)*, a Taoist priest.—P. med. 20.—H. K. VI. 41.—I have not been able to find out when this author lived.—Compare also Mayers 785 青囊書 *Ts'ing nang shu*, the medical treatises of the Azure satchel, by *Kuo P'ò* of the Tsin dyn.

953. 青箱雜記 *Ts'ing siang tsa ki*. Sung dyn.—S. K. K. XIV. 11.

954. 青棠集 *Ts'ing t'ang tsi*. Ming dyn.—S. K. CLXXIX. 32.

955. 左貴嬪集 *Tso kui pin tsi*.—P. 39.—T. P.—The Sui lit. notices a work 左九嬪集 *T'ò kiu pin tsi*, which is probably the same.

956. 昨夢錄 *Tso meng lu*, by 康譽之 *K'ang Yü chi*. Sung dyn.—P. 38.—S. K. CXLIII. 8.

957. 楚國先賢傳 *Ts'u kuo sien hien ch'uan*, by 張方賢 *Chang Fang hien*. Tsin dyn.—P. 31.—S. Y.

958. 楚辭 *Ts'u sz'*. Elegies of Ts'u, the poetical production of 屈原 *K'ü Yüan*. 4th cent. B. C.—P. 27.—Wylie 181.

959. 楚辭芳草譜 *Ts'u sz' fang ts'ao pu*. An account of the plants mentioned in the Elegies of Ts'u (see No. 958), by 謝翱 *Sie Ao*, an author of the Sung, according to the S. K. K. XVI. 46.—Reprinted in the T. III.

960. 纂文 *Tsuan wen*, by 何承天 *Ho Ch'eng t'ien* of the (Liu) Sung dyn. (5th cent.).—P. 25.—S. Y.

961. 纂要方 *Tsuan yao fang*, by 崔行功 *Ts'ui Hing kung*. Middle of the 7th cent.—Biogr. T'ang shu 249.—P. med. 14.

962. 泉南志 *Ts'üan nan chi* and 泉南雜誌 *Ts'üan nan tsa chi*. Both are quoted in the T. and are perhaps the same. The last mentioned, according to S. K. LXXVII. 20, is of the Ming period.

963. 遵生八牋 *Tsun sheng pa tsien*. A discourse on Hygiene, by 高濂深 *Kao Lien shen*. A. D. 1591.—Frequently quoted in the T. and Ch.—Wylie 85.

964. 字林 *Tsz' lin*, by 呂忱 *Lü Shen* of the Tsin dyn.—P. 27.—W. H. CLXXXIX. 20.—The S. Y. notices a work with the same title by *Liu Shan king* of the Sui dyn.

965. 字說 *Tsz' shuo*, by 王安石 *Wang An shi* (see No. 461).—P. 27.
966. 子母秘錄 *Tsz' mu pi lu*, by 張傑 *Chang kie*. T'ang dyn.—P. med. 15.—Sung lit.—T'ang lit. (author).
967. 資生經 *Tsz' sheng king*, by 王執中 *Wang Chi chung*. Sung dyn.—P. med. 16.—S. K. K. X. 10.
968. 慈溪日鈔 *Ts'z' k'i ji ch'ao*, by 黃震 *Huang Chen*. 13th cent.—P. 36.—Wylie 70.
969. 此事難知 *Ts'z' shi nan chi*, by 王執中 *Wang Hai ts'ang* (see p. 48).—P. med. 16.—Wylie 79.
970. 獨行方 *Tu hing fang*, by 韋宙 *Wei Chou*. T'ang dyn.—Biogr. T'ang shu 240.—P. med. 14.—T'ang lit.
971. 獨異志 *Tu i chi*, by 李尤 *Li Yu*, or 李元 *Li Yuan*. T'ang dyn.—P. 34.—S. K. CXLIV. 3.—S. Y.
972. 獨醒雜誌 *Tu sing tsa ki*. A. D. 1185.—Wylie 158.
973. 獨斷 *Tu tuan*, by 蔡翬 *Ts'ai Yung*. A. D. 133—192.—P. 35.—S. K. K. XIII. 5.—Reprinted in the H. W.—Mayers 755.
974. 杜子美集 *Tu Tsz' mei tsi*. Writings of the celebrated poet 杜甫 *Tu Fu*, liter. appellation *Tsz' mei*. A. D. 712—770.—P. 38.—Mayers 680.
975. 杜陽編 *Tu yang pien*. An account of rare and curious objects brought to China from foreign countries from A. D. 763—872, by 蘇鶚 *Su O*. Latter part of the 9th cent.—P. 32.—Wylie 155.
976. 篤論 *Tu lun*, by 杜恕 *Tu Shu*. Tsin dyn.—P. 35.—S. Y.
977. 圖繪寶鑑 *T'u hui pao kien*. Middle of the 14th cent.—Wylie 110.
978. *T'u king pen ts'ao*. See p. 47.
979. *T'u shu tsi ch'eng*. See p. 71.
980. 土宿真君本草 *T'u Su (chen kün) Pen ts'ao*. Materia medica of *T'u Su* (see No. 906).—Mentioned in the P. XV. 38.
981. 吐納經 *T'u na king*. A Taoist work on the curing of diseases by various modes of breathing —P. 35.—T. P.—Apparently a production of the 4th or 5th cent.
982. 退齋閑覽 *T'ui chai hien lan*, by 侯延賞 *Hou Yen shang*, or 侯延慶 *Hou Yen k'ing*. Sung dyn.—P. 36.—S. Y.

983. 遁甲開山圖 *Tun kia k'ai shan t'u*. 5th cent.—P. 34.—Sui lit.—S. Y.

984. 遁甲書 *Tun kia shu*. An ancient Taoist work on divination.—P. 26.—Sui lit.

985. 遜齋閑覽 *T'un chai hien lan*, by 陳正敏 *Ch'en Cheng min*. Beginning of the 12th cent.—P. 36.—W. H. CCXVIII. 1.

986. 燉煌新錄 *T'un huang sin lu*. About A. D. 929.—W. H. CXC. 10.—T. P.—T'un huang is the present An si in Kan su.

987. 東軒筆錄 *Tung hien pi lu*. Close of the 11th cent.—Wylie 157.

988. *Tung i pao kien*. See p. 102 and p. 136.

989. 東溪試茶錄 *Tung k'i shi ch'a lu*. A treatise on the Tea of Tung k'i (an ancient name for a district in Fu kien), by 宋子安 *Sung Tsz' an*. Sung dyn.—S. K. K. XII. 21.

990. 東觀秘記 *Tung kuan pi ki*.—P. 30.—This is I suppose the same as the 東觀漢記 *Tung kuan Han ki*, frequently quoted in the T. and according to the S. K. K. V. 21 completed about A. D. 170. Tung kuan was the name of a pavillion in the palace of the Han at Lo yang.

There is also a 東觀奏記 *Tung kuan tsou ki* of the T'ang dyn.—W. H. CXCVI. 22.

991. 東坡詩集 *Tung p'o shi tsi*. Poems of *Tung p'o*, which is the pseudonym of 蘇軾 *Su Shi*, a celebrated statesman, poet, and commentator. A. D. 1036—1101.—P. 38.—Mayers 623.

992. 東陽方 *Tung yang fung*. Medical prescriptions, by 范汪 *Fan Wang* of the Eastern Tsin.—P. med. 13.—*Tung i pao kien* 4.—Biogr. Tsin shu 75.

993. 東垣十書 *Tung Yüan shi shu*. The ten books of Tung yüan (see p. 48).—*Tung i pao kien* 6.—H. K. VI. 37.

994. 洞冥記 *Tung ming ki*. A work attributed to 郭憲 *Kuo Hien* of the Han and relating to the time of Wu Ti. B. C. 140—86.—P. 24.—Wylie 153 —Reprinted in the H. W.

995. 洞山芥茶系 *Tung shan kie ch'a hi*, by 周高起 *Chou Kao k'i*. Present dyn.—According to Wylie 119 this is an account of the Teas of the Tung hill, one of the Kie (芥) range (in Hu chou, Che kiang). I do not find these mountains marked on Chinese maps, nor are they noticed in the great geography of

China (see p. 87). But according to the latter work Tea is produced on the 羅嶠 *Lo kie (kiai)* mountains (Chang hing hien in Hu chou fu).—The Yu ming shan ki reprints an article entitled 羅嶠茶記 *Lo kie ch'a ki*.

996. 洞天清錄 *Tung t'ien ts'ien lu*. 13th cent.—Wylie 134.

997. 洞微志 *Tung wei chi*. Sung dyn.—P. 24.—W. H.—Reprinted in the W. P.

998. 董子 *Tung tsz'*. Writings of 董無心 *Tung Wu sin*, a philosopher between the 5th and 3rd cent. B. C.—P. 35.—Hau lit.—Sui lit.

999. 通志 *T'ung chi*, by 鄭樵 *Cheng Ts'iao*. A. D. 1108—1162.—P. 31.—Mayers 61.—S. K. K. V. 21.—There is a section on Chinese plants in the work.

1000. 通鑑綱目 *T'ung kien kang mu*. The well-known Chinese Annals drawn up by the celebrated *Chu Hi* (see No. 75).—Wylie 20.—P. 34.

1001. 通鑑外紀 *T'ung kien wai ki*. 11th cent.—Wylie 20.

1002. 通俗文 *T'ung su wen*, by 服虔 *Fu K'ien* of the After Han.—P. 32.—S. Y.

1003. 通典 *T'ung tien*, the work which formed the basis of the Wen hien t'ung k'ao (q. v.), by 杜祐 *Tu Yu*, in the 9th cent.—P. 24.—Wylie 55.

1004. 通雅 *T'ung ya*. Ming dyn.—S. K. K. XIII. 13.

1005. 桐栢山志 *T'ung po shan chi*. Description of the T'ung po mountain (see Appendix 64), by 薛應旂 *Sie Ying k'i*. Ming dyn.—Reprinted in the Yu ming shan ki.

1005a. 桐譜 *T'ung pu*. Treatise on the *t'ung* trees (*Sterculia*, *Elaeococca*, and other trees), by 陳翥 *Ch'en Chu*. Sung dyn.—P. 29.—Reprinted in the Ch. descr. part XX. 33.—H. K. III. 15.

1006. 童子秘訣 *T'ung tsz' pi kue*, by 姚和衆 *Yao Ho chung*. Tang dyn.—P. med. 22.—T'ang lit.

1007. 外科發揮 *Wai k'o fa hui*.

外科經驗方 *Wai k'o king yen fang*.

外科心法 *Wai k'o sin fa*.

外科通玄論 *Wai k'o t'ung huan lun*.

These four treatises on external complaints, enumerated P. 22, are by 薛己 *Sie Ki*, a celebrated physician of the Ming.—Tung i pao

kien 8.—The H. K. VI. 32 enumerates all his works contained in the 薛氏全書 *Sie shi ts'üan shu*.

1008. 外科集驗方 *Wai k'o tsi yen fang*, by Chou Liang ts'ai (see No. 219).—P. med. 22.

1009. 外科精義 *Wai k'o tsing i*, by 齊德之 *Ts'i Te chi*. Yüan dyn.—P. med. 22.—Wylie 80.

1010. 外科精要 *Wai k'o tsing yao*, by Ch'en Tsz' ming (see No. 117).—P. med. 22.

1011. 外國志 *Wai kuo chi*. Account of foreign countries. Quoted in the K. and T.—Seems to date from the 4th cent.

1012. 外國記 *Wai kuo ki*. A treatise on foreign countries. Commencement of the present dyn.—Reprinted in the C. T.

1013. 外臺秘要方 *Wai t'ai pi yao fang*, by 王彙 *Wang Tao*. T'ang dyn.—Biogr. Sin T'ang shu 98.—P. med. 13.—S. K. K. X. 6.

1014. *Wan hua ku*. See No. 330.

1015. 王梅溪集 *Wang mei k'i tsi*.—P. 39.—This is the literary production of 王十朋 *Wang Shi p'eng*, liter. appellation 龜齡 *Kui ling*. 12th cent.—W. H. CCXLVII. 10.

1016. 王維詩集 *Wang Wei shi tsi*. Poetical productions of Wang Wei. A. D. 699—759.—P. 38.—Mayers 827.

1017. 王微讚 *Wang Wei tsan*. Commendations of Wang Wei of the (Liu) Sung dyn. 5th cent.—P. 27.—Sui lit.

1018. 王元之集 *Wang Yüan chi tsi*. Writings of Wang Yüan chi. Sung dyn.—P. 38.—W. H. CCXXXIII. 27.

1019. 魏畧 *Wei lio*, by 魚豢 *Yü Huan*. Period of the three Kingdoms.—P. 25.—S. Y.

1019a. *Wei shu*. See No. 172.

1020. *Wei tu fu*. See No. 656.

1021. *Wei wang Hua mu chi*. See p. 39.

1022. 魏文帝集 *Wei Wen Ti tsi*. Writings of the Emperor Wen Ti of the Wei dyn. A. D. 221—227.—P. 37.

1023. 魏武帝食制 *Wei Wu Ti shi chi*. Emperor Wu Ti's (see the next) Regulations for food.—P. med. 16.—T. P.

1024. 魏武帝集 *Wei Wu Ti tsi*. Writings of the Emperor Wu Ti or Ts'ao Ts'ao, died 220, the founder of the Wei dynasty.—P. 37.—Mayers 768.

1025. 衛生易簡方 *Wei sheng i kien fang*, by 胡澹 *Hu Yung*. Beginning of the 15th cent.—P. med. 17.—Ming lit.

1026. 衛生家寶方 *Wei sheng kia pao fang*, by *Chu Tuan chang* (see No. 921).—P. med. 17.—Sung lit.

1027. 衛生謬 *Wei sheng ko*, by 真德秀 *Chen Te siu*, pseudonym 西山 *Si shan*. A. D. 1178—1235.—P. med. 17.—Mayers 58.

1028. 衛生寶鑑 *Wei sheng pao kien*. A work on the preservation of health, by 羅謙甫 *Lo K'ien fu*, liter. appellation 益之 *I chi*, pseudonym 天益 *T'ien i*. Yüan dyn.—P. med. 17.—*Tung i pao kien* 6.

1029. 葦航紀談 *Wei hang ki t'an*. Sung dyn.—P. 35.—S. Y.—Reprinted in the W. P.

1030. 威靈仙傳 *Wei ling sien ch'uan*. A memoir on the medical virtues of the plant *Wei ling sien*, by 嵩陽子 *Sung Yang tsz'*. Close of the 8th cent.—P. 15.—T. CLXXII.

1031. 文系 *Wen hi*.—P. 36.—Seems to belong to the T'ang period.

1032. *Wen hien t'ung k'ao*. See p. 134.

1033. 文選 *Wen sian*, by 蕭統 *Siao T'ung*. A. D. 530.—P. 27.—Wylie 192.—This work has been commented upon by 李善 *Li Shan*, A. D. 658.

1034. 文字指歸 *Wen tsz' chi kui*, by *Ts'ao Hien* (see No. 383).—P. 37.—T'ang lit.

1035. 文苑英華 *Wen yüan ying hua*, by 李昉 *Li Fang*. A. D. 987.—P. 32.—Wylie 193.

1036. 聞奇錄 *Wen k'i lu*. Towards the close of the T'ang dyn.—W. H. CCXV. 13.—Reprinted in the W. P.

1037. 聞見近錄 *Wen kien kin lu*. Sung dyn.—S. K. K. XIV. 25.

1038. 聞見錄 *Wen kien lu*, by 邵伯溫 *Shao Po wen*. Sung dyn.—S. K. K. XIV. 24, 25.

A work with the same title appeared in the Ming period.—S. K. CXLIV. 21.

1039. 吳船錄 *Wu ch'uan lu*. A journal kept during a journey from Sz' ch'uan to Hang chow, A. D. 1177, by *Fan Ch'eng ta* (see No. 388).—Wylie 29.

1040. 吳下思家志 *Wu hia sz' kia chi*. Sung dyn.—S. Y.

1041. 吳興記 *Wu hing ki*. Records of the department of Wu hing (Che kiang), by 山謙之 *Shan K'ien chi*.—Sui lit.
1042. 吳紀 *Wu ki*. Records of the Kingdom of Wu (Kiang su, Che kiang), by 環濟 *Huan Tsi*. Tsin dyn.—P. 30.—Sui lit.
1043. 吳錄地理志 *Wu lu ti li chi*. A description of the Kingdom of Wu (see the preceding), by 張勃 *Chang Pu*. Period of the three Kingdoms, 3rd cent.—P. 30.—S. Y.—Quoted in the *Ts'i min yao shu*.—Sometimes the title is written simply *Wu lu*.
1044. 吳地記 *Wu ti ki*. A work similar to the preceding, by 陸廣微 *Lu Kuang wei*. Close of the 9th cent.—S. K. K. VII. 20.
1045. *Wu tu fu*. See No. 656.
1046. *Wu shi Pen ts'ao*. See p. 40.
1047. 吳越春秋 *Wu Yüe ch'un ts'iu*. Ancient history of the small States of Wu and Yüe, extending from the 12th to the 5th cent. B. C., by 趙曄 *Chao I*, a Taoist recluse, who lived towards the end of the first cent. of our era.—Wylie 32.—Legge's *Shu king*, prol. 67.
1048. 五行記 *Wu hing ki*.—T'ang lit.
1049. 五行書 *Wu hing shu*.—P. 26.—This is probably the same as the 雜五行書 *Tsa wu hing shu* of the list in the T. P. and which is already quoted in the *Ts'i min yao shu*.
1050. 五溪記 *Wu k'i ki*.—P. 25.—T. P. (10th cent.).
1051. 五色線 *Wu se sien*. Sung dyn.—S. K. CXLIV. 7.
1052. 五代史 *Wu tai shi*. History of the Wu tai or five dynasties, A. D. 907—960, by 薛居正 *Sie Kü cheng*. 10th cent.—P. 30.—Wylie 18.
1053. 五臺山記 *Wu t'ai shan ki*. Account of the Wu t'ai mountain (see Appendix 69). Ming dyn.—There is also a 五臺山志 *Wu t'ai shan chi* of the Ming period.—Quoted in the K. and T.
1054. 五雜俎 *Wu tsa tsu*. Ming dyn.—Quoted in the K. and T.
1055. 物類相感志 *Wu lei siang kan chi*. A series of memoranda regarding natural productions, medicines, food, etc., by *Su Tung p'o* (see No. 991).—Wylie 133.—But the P. 28 gives as the author of a work with the same title *Tsan ning* (see No. 67).—S. K. CXXX. 1.

1056. 物理論 *Wu li lun*, by 楊泉 or 楊全 *Yang Ts'üan*. Tsin dyn.—P. 28.—Sui lit.—S. Y.

1057. 吾學編 *Wu hio pien*. A history of the Ming dynasty. A. D. 1575.—P. 30.—Wylie 25.

1058. 武夷山志 *Wu i shan chi*. Description of the Wu i mountain (see Appendix 67), famed for its Tea, by 裘仲孺 *K'iu Chung ju*. Beginning of the 15th cent.—A work with the same title was written in the middle of the 16th cent. by 徐表然 *Sü Piao jan*.—S. K. LXXVI. 2, 9.—Wylie 43.

1058a. 武夷山記 *Wu i shan ki* (see the preceding), by the Taoist priest *Tu Kuang t'ing* (see No. 492).

1058b. 武林舊事 *Wu lin kiu shi*, by *Chou Mi* (see No. 48).—Wylie 45.

1059. 務本新書 *Wu pen sin shu*. Frequently quoted in the *Nung cheng ts'üan shu*. Apparently a production of the Ming period which deals with agriculture.—P. 34.

1060. 梧潯雜佩 *Wu Sin tsa pei*. Memoranda regarding Wu chou fu and Sin chou fu (Kuang si). Ming dyn.—Quoted in the K. and T.

1061. 雅述 *Ya shu*, by 王廷相 *Wang T'ing siang*, literary appellation 浚川 *Sün ch'uan*. Middle of the 16th cent.—P. 35.—S. K. CXXIV. 19; CLXXVI. 13.

1062. *Yang lao shu*. See No. 741.

1063. 養疴漫筆 *Yang o man pi*, by 趙潛 *Chao Tsin*. Sung dyn.—P. 37.—S. K. CXLIII. 9.

1064. 養生主論 *Yang sheng chu lun*, by 王隱君 *Wang yin kün*.—P. med. 17.—The *Tung i pao kien* 7 styles the author 王匡 *Wang Kuang*. Yüan dyn.

1065. 養生論 *Yang sheng lun*, by 嵇康 *Ki K'ang*, a celebrated alchemist. A. D. 223—262.—P. 37.—Mayers 245.

1066. 養生必用方 *Yang sheng pi yung fang*, by 初虞世 *Ch'u Yü shi*. Sung dyn.—P. med. 17.—W. H. CCXXIII. 3.

1067. 揚州芍藥譜 *Yang chou Shao yao pu*. A treatise on the Shao yao flower (*Pæonia albiflora*) of Yang chou (Kiang su), by 王觀 *Wang Kuan*. Second half of the 11th cent.—Wylie 121.—Reprinted in the T. CXV.

1068. 藥準 *Yao chun*. A treatise on medicines, by 文彥博 *Wen Yen po*, styled also 潞國公 *Lu kuo kung*. A. D. 1106—1097.—P. med. 14.—Mayers 855.—W. H. CCXXIII. 2.

1069. 藥譜 *Yao pu*. Frequently quoted in the T.—A treatise with this title is reprinted in the W. P. It is a collection of synonyms of drugs, dating from the T'ang dyn.

1070. *Yao sing lun*. See p. 44.

1071. *Yao sing pen ts'ao*. See p. 44.

1072. *Yao tsung küe*. See p. 43.

1073. *Yao tui*. See p. 40.

1074. 要覽 *Yao lan*, by *Lu K'i* (see p. 33) of the 3rd cent.—S. Y.—Reprinted in the W. P.

In the Sui lit. we find several works with the above title by different authors, all of the 5th or 6th cent.

1075. 野人閑話 *Ye jen hien hua*, by *King Huan* (see No. 536).—P. 27.—S. Y.—Reprinted in the W. P.

1076. 野史 *Ye shi*.—P. 34.—The *Ye shi* is noticed in the list of the T'ang lit. and in the T. P.—The S. Y. mentions a work of this name published during the Sung period.

1077. 野菜譜 *Ye ts'ai pu*. A treatise on wild growing plants used as vegetables, by 王盤 *Wang P'an*, liter. appellation 鴻漸 *Hung tsien*, pseudonym 西樓 *Si lou*, a native of Kao yu (Yang chou fu, Kiang su). First half of the 16th cent. He is not to be confounded with *Wang P'an* of the Yüan (see p. 82).—P. 29.—S. K. CII. 14.—H. K. VI. 22.

The *Ye ts'ai pu* is found reprinted at the end of the *Nung cheng ts'üan shu* (see p. 82). It gives accounts of 60 wild growing edible plants (of the province of Kiang su), accompanied with miserable drawings.

1078. 野菜贊 *Ye ts'ai tsan*. A small treatise on wild growing plants used as vegetables, by 顧景星 *Ku King sing*. Present dyn.—Frequently quoted in the Ch.—Reproduced in the C. T.

1079. 鄴中記 *Ye chung ki*, by 陸翹 *Lu Hui*. Tsin dyn.—P. 32.—S. K. K. VI. 23.—Quoted in the *Ts'i min yao shu*.

The T. P. notices besides *Lu Hui's* work a *Ye chung ki* by 石虎 *Shi Hu*.

1080. 燕翼貽謀錄 *Yen i i mou lu*. Sung dyn.—S. K. K. V. 27.

1081. 燕山叢錄 *Yen shan ts'ung lu.* Ming dyn.—S. K. CXLIV. 19.
1082. 燕吳行紀 *Yen nu hing ki,* by 張氏 *Chang (shi).* T'ang dyn.—P. 25.—T'ang lit.
1083. 延齡至寶方 *Yen ling chi pao fang,* by *Yao Ho chung* (see No. 1006). T'ang dyn.—P. med. 13.—T'ang lit.
1084. 延年秘錄 *Yen nien pi lu.*—P. med. 14.—T'ang lit.
1085. 煙花記 *Yen hua ki.*—Quoted in the T.—The W. P. reprints a memoir of the T'ang period entitled 南部煙花記 *Nan pu yen hua ki,* which is perhaps the same.
1086. 煙譜 *Yen pu.* A treatise on Tobacco, by 陸燿 *Lu Yao.* End of the 18th cent. (see No. 265).—Reprinted in the C. T.
1087. 彥周詩話 *Yen chou shi hua.* A. D. 1128.—Wylie 197.
1088. 演繁露 *Yen fan lu.* A. D. 1175.—Wylie 129.
1089. 硯譜 *Yen pu.* A treatise on Ink pallets, by *Su I kien* (see No. 53).—P. 29.—S. K. K. XII. 18.
1090. 弁山園記 *Yen shan yüan ki,* by *Wang Shi chen* (see No. 207).—Quoted in the K. and T.—*Yu ming shan ki.*
There is a mountain *Yen shan* in Shan tung (Tung ch'ang fu, Sin hien). But the pseudonym of Wang Shi chen was also *Yen shan.*
1091. 鹽鐵論 *Yen t'ie lun.* The title means "Salt and Iron," but it treats mostly of State questions. The P. 29 gives 桓譚 *Huan Tan* as the name of the author (see No. 786), but in the S. Y. as well as in the H. W., where this disquisition is reprinted, and also in the Han lit., the name of the author reads 桓寬 *Huan K'uan.* He wrote during the reign of Chao Ti, B. C. 86—73.
1092. 晏子春秋 *Yen tsz' ch'un ts'iu.* A personal narrative regarding 晏嬰 *Yen Ying,* a celebrated statesman; died 493 B. C. It is the production of an anonymous writer some centuries B. C.—P. 35.—Wylie 28.
1093. 陰證發明 *Yin cheng fa ming,* by *Wang Hai ts'ang* (see p. 48). Yüan dyn.—P. med. 17.
1094. 陰德錄 *Yin te lu,* by *Chou Pi ta* (see No. 61).—P. 37.
1095. 因話錄 *Yin hua lu.* A record of matters relating to the 8th cent.—Wylie 152.

1096. 飲膳正要 *Yin shan cheng yao*, by 和斯輝 *Ho Sz' hui*. Yüan dyn.—P. med. 16.—S. K. CXVI. 27.

1097. 嬰孩寶鑑 *Ying hai pao kien*, by 湯衡 *T'ang Heng*. Sung dyn.—P. med. 22.—W. H. CCXXIII. 12.

1098. 瀛涯勝覽 *Ying yai sheng lan*. Account of the shores of the Ocean, by 馬觀 *Ma Kuan*. A. D. 1416.—S. K. LXXVIII. 15.

1099. 應驗方 *Ying yen fang*, by 包會 *Pao Hui*.—P. med. 20.—T'ang lit.

1100. 游宦紀聞 *Yu huan ki wen*, by 張世南 *Chang Shi nan*. Early in the 13th cent.—P. 38.—Wylie 132.

1101. 游名山志 *Yu ming shan chi*. Visits to the celebrated mountains of China, by 謝靈運 *Sie Ling yün*, a celebrated poet of the 5th cent.—Sui lit.—S. Y.

1101a. 游名山記 *Yu ming shan ki*. A collection of the descriptive accounts and memoirs regarding the hills of note in China, by *Wang Shi chen* (see No. 207). I have frequently consulted this work, in which the matter is arranged according to the hills of each province.

1102. *Yu yang tsa tsu*. See p. 95.

1103. 幽明錄 *Yu ming lu*, by *Liu I k'ing* (see No. 729).—P. 37.

1104. 幼幼新書 *Yu yu sin shu*, by 劉昉 *Liu Fang*. Sung dyn.—P. med. 22.—W. H. CCXXIII. 11.

1105. 玉機微義 *Yü ki wei i*, by 劉純 *Liu Shun*, liter. appellation 宗厚 *Tsung hou*. Yüan and Ming dyn.—P. med. 18.—Tung i pao kien 6.—S. K. CV. 15.

1106. 玉篇 *Yü pien*. A Chinese dictionary, by 顧野王 *Ku Ye wang*. A. D. 523.—P. 27.—Wylie 8.

1107. 玉堂閒話 *Yü t'ang kien hua*. Wu tai period.—S. Y.

1108. 玉堂雜記 *Yü t'ang tsa ki*, by *Chou Pi ta* (see No. 61).

1109. 玉策記 *Yü ts'e ki*, by *Ko Hung* (see note 12 [8]).—P. 34.—T. P.

1110. 玉獨寶典 *Yü tu pao tien*, by 杜臺卿 *Tu T'ai k'ing*. Sui dyn.—P. 33.—S. Y.

1111. 玉洞要訣 *Yü tung yao küe*, by *Chang Kao* (see No. 858).—P. 29.

1112. 餘冬序錄 *Yü tung sü lu*, by 何孟春 *Ho Meng ch'un*. Ming dyn.—P. 36.—S. Y.

1112a. 餘話 *Yü hua*. This is the third section of the *Hui chu lu* (see No. 209).

1113. 寓簡 *Yü kien*. A. D. 1174.—Wylie 132.

1114. 庾肩吾集 *Yü Kien wu tsi*. Writings of *Yü Kien wu* of the Liang dyn.—P. 27.—Sui lit.

1115. *Yü yin ts'ung hua*. See No. 877.

1116. *Yü kung*. See p. 33.

1117. 御製盛京賦 *Yü chi Sheng king fu*. A poetical production of the Emperor *K'ien lung* (1736—1796) praising Shen king (Mukden, Southern Manchuria). Father P. Amiot in 1770 published a translation of it from the Manchu version (*Éloge de la ville de Moukden et de ses environs, par l'Empereur Kien long*). There exists also a translation by Klaproth from the same text. It forms part of his *Chrestomathie Mandchoue*, 1828.—The Chinese text of the poem is found in the last edition of the *Shen king t'ung chi* (see p. 88). It contains some particulars regarding the natural productions of Manchuria.

1118. 元真子 *Yüan chen tsz'*. 8th cent —Wylie 176.

1119. *Yüan feng Kiu yü chi*. See No. 345.

1120. 元和郡縣志 *Yüan ho Kün hien chi*. A topography of China accompanied with maps, published during the period *Yüan ho* (806—21), by 李吉甫 *Li Ki fu*.—S. K. K. VII. 2.

1121. *Yüan I t'ung chi*. See p. 86.

1122. *Yüan lan*. See No. 197.

1123. 元史 *Yüan shi*. History of the *Yüan* or Mongol dynasty, A. D. 1260—1368, by 宋濂 *Sung Lien* and others.—P. 30.—Wylie 19.

1124. 淵明別傳 *Yüan ming pie ch'uan*. Narrative regarding *Yüan ming*, who is the same as *T'ao Ts'ien* (see No. 796).—S. K. K. XV. 3.—Mayers 713, 715.

1125. 淵穎集 *Yüan ying tsi*. Writings of 吳萊 *Wu Lai*, styled also *Yüan ying*. *Yüan* dyn.—P. 38.—S. K. K. XVII. 16.

1126. 原機啓微集 *Yüan ki k'i wei tsi*, by 倪維德 *I Wei te*, a celebrated physician; died 1377.—Biogr. Ming shi 299.—P. med. 23.—H. K. VI. 39.

1127. 原病式 *Yüan ping shi*, by *Liu Ho kien* (see No. 812).—
P. med. 16.

1128. 圓覺經 *Yüan kio king*. Taoist work. T'ang dyn.—
P. 37.—T'ang lit.

1129. 園林草木疏 *Yüan lin ts'ao mu shu*, by *Wang Fang k'ing* (see No. 466).—T. CLXXV. CCCXIII.

1130. 袁子正書 *Yüan tsz' cheng shu*, by 袁準 *Yüan Chun*.
Period of the three Kingdoms.—S. Y.

1131. 越絕書 *Yüe tsüe shu*. History of the ancient State of
Yüe (Southern China). After Han.—Reprinted in the H. W.—
S. K. K. VI. 22.

1132. 悅生隨抄 *Yüe sheng sui ch'ao*, by 賈似道 *Kia Sz' tao*;
died 1256.—P. 32.—S. Y.—Reprinted in the W. P.—
Mayers 252.

1133. *Yüe ling*. See p. 33.

1134. 雲林遺事 *Yün lin i shi*, by *Ku Yüan k'ing* (see No. 7).—
Reprinted in the W. P.

1135. 雲林石譜 *Yün lin shi pu*. A treatise on Stones, by
杜綰 *Tu Wan*, liter. appellation 季陽 *Ki Yang*, pseudonym
Yün lin. Sung dyn.—P. 29.—S. K. CXV. 30.

1136. 雲南行記 *Yün nan hing ki*.—T'ang lit.

1137. 雲南記 *Yün nan ki*. Memoranda regarding Yün nan,
by 袁滋 *Yüan Tsz'*. Beginning of the 9th cent.—Biogr. T'ang
shu 240.—P. 31.—T'ang lit.

1138. *Yün nan t'ung chi*. See p. 91.

1139. 雲仙散錄 *Yün sien san lu*. T'ang dyn.—W. H.
CCXV. 17.

1140. 雲仙雜記 *Yün sien tsa ki*. Beginning of the 10th
cent.—Wylie 152.

1141. 韻府羣玉 *Yün fu k'ün yü*. A Encyclopædia, by
陰時夫 *Yin Shi fu*. Yüan dyn.—P. 27.—Wylie 27.

1142. 韻語陽秋 *Yün yü yang ts'iu*, by 葛立方 *Ko Li fang*.
Sung dyn.—P. 39.—S. K. XX. 5.

1143. 永嘉記 *Yung kia ki*. Account of the district of Yung
kia (Che kiang). 5th cent or earlier.—Quoted in the Ts'i min yao
shu.—P. 25.—T. P.

1144. 永類鈴方 *Yung lei kin fang*, by 李仲南 *Li Chung nan*, liter appellation 棲季 *Si ki*. Yüan dyn.—P. med. 18.—Tung i pao kien 7.

1145. 容齋隨筆 *Yung chai sui pi*, by 洪邁 *Hung Mai*. A. D. 1123—1203.—P. 36.—Mayers 198.—Wylie 128.

1146. 湧幢小品 *Yung ch'uang siao p'in*. Ming dyn.—S. K. CXXVIII. 10.

1147. 癰疽方論 *Yung tsü fang lun*, by 李迥 *Li Sin*. Sung dyn.—P. med. 22.—S. K. K. X. 11.

1148. *Yung yao fa siang*. See p. 48.

I N D E X

OF CHINESE AUTHORS.

N.B.—The figures refer to the numbers of the Alphabetical List of Chinese Works, unless the page be indicated.

- Ai Yüan ying. 260.
- Chang Chan. 458.
— Chung king. 324. 325.
 678.—p. 41.
— Fang hien. 957.
— Heng. 555.
— Hie. 13.
— Hua. 268. 332. 637.
— Huai. 398.
— Huan. 783.
— I. 180. 383.
— Ju pi. 15.
— Jui. 276.
— Kao. 231. 858. 1111.
— Ki. p. 41.
— Kie. 966
— Kie ku. 224. 291.—
 p. 48.
— K'ien. p. 24.
— K'ien te. 621.
— Lei. 16. 523.
— Li siang. 35.—p. 81.
— Pang k. 524.
— Pu. 1043.
— San feng. 785.
— (shi). 1082.
— Shi ch'e. 274. 687.
— Shi cheng. 375.
— Shi nan. 54. 1100.
— Sho. 23.
— Sun wu ki. p. 44.
— Tsi. 14.
— Tsun king. 669.
— Tsung cheng. 262.
— Tsz' ho. 262.
— Tuan i. 390.
— Wen chung. 815.
— Yü si. p. 7.
— Yüan su. p. 48.
— Yüe. 451.
- Ch'ang K'ü. 190. 542.
- Chao Hui k'ien. 475.
— I. 1047.
— I tao. 351.
— Ju huo. 72.
— Ki tsung. 261.
— Ku tse. 475.
— Shi keng. 321.
- Chao Ts'ai. 160.
— Tsin. 1063.
— Tsz' mien. 907.
— Yü shi. 618.
— Yüe. 351.
- Ch'ao Yüan fang. 619.
- Chen Kuan. p. 44.
— Si shan. 1027.
— Te siu. 1027.
- Chen Ao. 57.
— Cheng min. 985.
— Cheng. 731.—p. 47.
— Chi. 741.
— Chu. 105a.
— Fu liang. 51.
— Hao tsz'. 179.
— Hien chang. 627.
— Huai yüan. 559.
— Jen yü. 397. 411.
— Ji hua. 338. 795.
— Ki. 9.
— Ki ju. 28. 403. 604.
— Ki. 21.
— Kia mo. p. 54.
— King. 155.
— Kua. 510. 797.
— Li. 133. 314.
— Ling kü. 495.
— P'eng nien. 301.
— Pien. 338.
— Shan. 509.
— Shen. 35a.
— (shi). 35.
— Shi liang. p. 46.
— Shou. 246. 650.
— Shun yü. 495.
— Siang. 632.
— Sz'. 134.
— Ting. 69.
— Ting. 448.
— Ting ts'ai. p. 54.
— Ts'ang k'i. p. 45.
— Ts'un chung. 472. 510.
— Tsz' ang. 34.
— Tsz' ming. 117. 1010.
— Wu tse. 658.
— Yen. 658.
— Yen chi. 781.
— Yo. 820. 927.
- Ch'en Yüan lung. 347.
— Yüan tsing. 719.
— Yung. 462. 463.
- Cheng Ch'u hui. 521.
— Hiung. 103.
— Hüan. p. 33.
— K'ien. p. 45.
— Ts'iao. 999.—p. 37.
— Wang chi. 674.
- Ch'eng chai. p. 49.
— Chung. 788.
— Hung chi. 333.
— (shi). 43.
— Wu ki. 679.
— Yü wen. 181. 186.
- Chi. p. 46.
— tsai. p. 40.
- Chou Ch'u. 113.
— Fei. 259.
— hien wang. p. 49.
— Kao k'i. 995.
— K'ü fei. 470.
— kung. p. 34.
— Liang ts'ai. 219. 1008.
— Mi. 42. 48. 148. 391.
 930. 1058b.
— Pi. 474. 764.
— Pi ta. 61. 343. 1094.
 1108.
— Po ki. 474. 764.
— (shi). 482.
— Sü. 482. 486.
— Ta kuan. 27.
— ting wang. 642. 793.—
 p. 49.
— Tsz' chi. 65.
— Wen ts'ai. 219.
— Ying. 317.
- Ch'ou Yüan. 573.
- Chu. p. 76.
— Chen heng. 214. 323.—
 p. 49.
— Chung. 778.
— Fa chen. 488.
— Fu. 288.
— Hi. 74. 75. 1000.
— Hüan. 710.
— Ko k'o. 73.
— Kung. 556.

- Chu Mu. 107. 721.
 — Siao. 642.—p. 49.
 — Tuan chang. 921.
 — Yen siu. p. 49.
 — Ying. 119.
 Ch'u Ch'eng. 252.
 — Hua. 534.
 — Yü shi. 357. 1066.
 — Yung. 370.
 Chuang Chou. 83.
 Ch'un Yü i. p. 41.
 Chung king. p. 41.
 — Yü. 409.

 Fa yün. p. 94.
 Fan Ch'eng ta. 364. 386.
 387. 388. 507. 732.
 1039.
 — Kuang. p. 35.
 — Li. 104.
 — Sheng chi. p. 76.
 — Wang. 992.
 — Ye. 170.
 Fang Cho. 634.
 — Hiao ju. 816.
 — Hü ku. 105.
 — Hui. 105.
 — K'iao. 946.
 — Kuang. 856.
 — Ts'ien li. 544.
 Fei Sin. 789.
 Feng Shi k'ö. 880.
 Fu Ch'en. 929.
 — Hien. 373.
 — Hou. 355.
 — K'ien. 356. 1002.
 — Kung. 157.
 — Wu ki. 356.

 Han Ch'an chi. 366.
 — Chi ho. 681.
 — Fei. 140.
 — kuang. p. 45.
 — O. p. 81.
 — Pao sheng. p. 46.
 — wen kung. 143.
 — Yen chi. 366.
 — Ying. 142.
 — Yü. 143.
 Hao ku. p. 48.
 Hia Te. 289.
 — Tsz' i. 289.
 Hiao. p. 41.
 Hien yüan. p. 41.
 — Yüan shu. 578.
 Hing K'ai. 864.
 — Ping. p. 37.
 Hiung Chung. 360.
 — Fan. 811.
 — Ki yüe. 281.
 — Tai ku. 281.
 — Tsung li. 118.

 Ho Ch'eng tien. 960.
 — Chung mo. 166.
 — Fa ch'eng. 944.
 — K'iao yüan. 515.
 — Kuan tsz'. 168.
 — Meng ch'un. 401. 1112.
 — Sien. 235.
 — Sz' hui. 1096.
 — Tsz' yüan. 401.
 — Yen. 342.
 — Yüan. 85.
 Hou Tien. 770.
 — tsi. p. 76.
 — Yen k'ing. 982.
 — Yen shang. 982.
 Hu Hia (kü shi). 633.
 — Kang tsz'. 459.
 — Kiao. 158.
 — Shi. p. 48.
 — Tsz'. 877.
 — Wen huan. p. 54.
 — Yung. 1025.
 Hü chen kün. 178.
 — Hiao tsung. 311.
 — Pa. p. 102.
 — Shan sin. 120.
 — Shen. 763.
 — Shu wei. 588.
 — Sun. 178.
 Hua T'ö. 99. 189.—p. 41.
 — yang chen jen. p. 43.
 — yüan hua. p. 41.
 Huai nan wang. 193. 710.
 Huan K'uan. 1091.
 — Tan. 786. 1091.
 — Tsi. 1042.
 Hüan Ts'ang. 772.
 Huang Chen. 968.
 — Fu. p. 42.
 — fu Mi. 200. 271. 297.
 875.—p. 42.
 — Hiu fu. 505.
 — Kung shao. 360.
 — Kung wu. 360.
 — Li keng. 434.
 — Shan ku. 202.
 — Sheng ts'eng. 96. 249.
 744.
 — Ti. 471 —p. 27. 41.
 — T'ing kien. 202. 665.
 799.
 Hui Tsung. 821. 822.
 Hung Ch'u. 154.
 — Hao. 826.
 — king. p. 42.
 — Kü fu. 154.
 — Mai. 251. 826. 1145.
 — nang kün shou. p. 35.
 — Wu. 62.

 I. 327.
 — Wei te. 1126.

 Jen Fang. 752.
 — Yü. 244.
 Ji hua. p. 46.

 K'ang hi. 700.
 — Yü chi. 956.
 — Ch'eng. 722.
 — Lien. 413. 908.
 — Lien shen. 963.
 — Wen hu. 454.
 — Wu. 895.
 — Yu. 10.
 Ki Chung king. p. 41.
 — Han. p. 38.
 — K'ang. 1065.
 — Yüe. 281.
 K'i. p. 77.
 — Po. p. 41.
 Kia I. 787.
 — Sz' niu. p. 77.
 — Sz' tao. 1132.
 Kiang Hiu fu. 296.
 — Kuan. p. 34.
 — Wan li. 809.
 — Yen. 305. 513a.
 Kie ku. p. 48.
 Kien Wen ti. 449.
 K'ien lung. 1117.
 Kin Yu tsz'. 581.
 King Fang. 240.
 — Huan. 536. 1075.
 — shun. p. 35.
 K'iu Chung ju. 1058.
 — K'jung shan. 400.
 — Kuang t'ing. 316.
 — Süan. 532.
 Ko Hung. 63. 150. 579.
 694. 695. 727. 769.
 1109. 1142.—p. 42.
 — K'ö kin. 727.
 — Li fang. 1142.
 K'ou Tsung shi. p. 48.
 Ku K'ai chi. 287.
 — Kie. 125.
 — King sing. 1078.
 — Wei. 377.
 — Wen tsien. 121.
 — Wen yen. 82.
 — Ye wang. 1106.
 — Yüan k'ing. 7. 1134.
 K'ü sien. 318. 319. 697.
 742.—p. 53.
 — Yüan. 445. 958.
 Kuan. p. 44.
 — Chung. 374.
 Kung Ming chi. 100.
 — Sin. 226.
 K'ung An kuo. 684.
 — Ch'uan. 404. 626.
 — Fu. 784.
 — ts'ung tsz'. 784.
 Kuo Chi mei. 487.

- Kuo Hien. 994.
 — I kung. 376.
 — Ki chung. 116.
 — King shun. p. 35.
 — Lü sheng. 751.
 — P'ò. 952a.—p. 35.
 — (shi). 196.
 — Siang. 83.
 — T'o t'ò. p. 79.
- Lao kün. 419.
 — tsz'. 419.
- Lei Hiao. p. 41.
 — kung. p. 40, 41.
- Li Ao. 57. 167.
 — Chao. 407.
 — Chung nan. 1144.
 — Fang. 847. 1035.
 — Han kuang. p. 45.
 — Hiao po. 436.
 — Hien. p. 87.
 — Hung chang. p. 69.
 — I shan. 438.
 — K'an. 68.
 — Kao. p. 48.
 — Ki fu. 1120.
 — Kiang. 620.
 — Kien yüan. p. 55.
 — Ko fei. 484.
 — Kuan. 757.
 — Kui. 784.
 — K'ui. 94.
 — Lien. 230.
 — Pao ch'en. 437.
 — Peng fei. 661.
 — P'ò. 825.
 — Shan. 1033.
 — Shen. 439.
 — (shi). 710.
 — Shi chen. 916.—p. 42,
 54.
 — Si ki. 1144.
 — Sin. 1147.
 — Sün. 825.—p. 35, 45.
 — Tai po. 441.
 — Tang chi. p. 40.
 — Tao. p. 77.
 — Tao yüan. 756.
 — Te yü. 205. 624.
 — T'iao yüan. p. 92.
 — T'ien. 263. 393.
 — T'ing fei. 661.
 — Tse. 3.
 — Tsi. p. 44.
 — Ts'üan. 848.
 — Tung pi. p. 54.
 — Tung yüan. p. 48.
 — Yen shou. 585.
 — Yen wen. 1. 258. 894.
 — Yu. 971.
 — Yüan. 971.
- Lie Yü k'ou. 454.
- Lin Hung. 664.
 — I. p. 47.
 — Sz' huan. 435.
- Ling Sü. 513.
- Liu An. 193. 194. 213.
 — Fang. 1104.
 — Fu. 726.
 — Han. p. 46.
 — Hi. 734.
 — Hiang. 211. 456. 765.
 — Hie. 786.
 — Hin. 769.—p. 35.
 — Hin k'i. 306a.
 — Ho kien. 675. 812. 1127.
 — Huan su. 812.
 — I k'ing. 729. 1103.
 — Ken. 480.
 — Ki. 893.
 — K'i. 151.
 — King shu. 239.
 — Kuan. 843.
 — Küan tsz'. 394.
 — Kung fu. 685.
 — Meng. 363.
 — Meng hi. 111.
 — Pin. 685.
 — Pin k'ò. 295.
 — Po wen. 893.
 — Shan king. 964.
 — Shun. 227. 1105.
 — Sün. 469.
 — Sung shi. 576.
 — Ta pin. 503.
 — Tsi. 111.
 — Tsung hou. 1105.
 — Tsung yüan. 478. 498.
 — Tsz' hou. 478. 479.
 — Yao. 445.
 — Ying li. 141.
 — Yu. 730.
 — Yü si. 80. 295.
- Lo I. 18.
 — I chi. 1028.
 — K'ien fu. 1028.
 — Pi. 491.
 — Shi. 195. 378. 846.—
 p. 86.
 — Sz' kü. 911.
 — Ta king. 169.
 — T'ien i. 1028.
 — Tuan liang. p. 37.
 — Yüan. p. 37.
- Lou Hou. p. 28.
 — Kü chung. 706.
- Lu Chi. 144.
 — Hia. 824.
 — Ho. 857.—p. 54.
 — Hui. 1079.
 — i. p. 41.
 — Ki. 1074.—p. 33.
 — Kia. 560. 786.
- Lu Kuang wei. 1044.
 — Kui meng. 493.
 — Kuo kung. 1068.
 — ming shan. p. 82.
 — Pao. 940.
 — Shen. 926.
 — Shi heng. p. 33.
 — T'ien. p. 37.
 — Ts'ang yung. 248.
 — Tung. p. 50.
 — Wen liang. 754.
 — Yao. 265. 1086.
 — Yin. 804.
 — Ying ku. p. 74.
 — Yu. 109. 418. 553. 887.
 — Yü. 4. 362.
- Lü Pu wei. 496.
 — Shen. 964.
- Ma Chi. p. 46.
 — Kao. 355.
 — Kuan. 1098.
 — Tuan lin. 1032.
- Mao Ch'ang. p. 33.
 — Chi fang. 714.
 — Siang. 309. 415.
 — Wen si. 6.
- Mei shi. 341. 918.
 — Yao ch'en. 508.
- Meng Ch'ang. p. 46.
 — K'i. 589.
 — Kuan. 465.
 — Shen. 606.—p. 45.
- Ming chi tsz'. p. 48.
- Mo Ti. 527.
- Nan kung Ts'ung. 353.
- Ning hien wang. p. 53.
 — Yüan. p. 54.
- Ou yang Sin. 115a. 393.
 485. 531. 571. 867.
 — yang Sün. 250.
- Pan ku. 138. 139. 625. 941.
- P'an Hüan. 77.
- P'ang An shi. 682.
 — Yüan ying. 862.
- Pao Hui. 1099.
 — p'ò tsz'. 579.—p. 42.
 — sheng. p. 46.
 — Yü. 807.
- P'ei Yüan. 377.
- P'eng Ch'eng. 525.
 — Tsu. 602.
- Pi Chung sün. 537.
- Pien Ts'iao. 617.—p. 41.
- Pin hu. 218. 916.
- Ping. p. 45.
- P'ing Yao k'ing. 676.
- Po Kü i. 17. 626.
 — Lo t'ien. 17.
- Liang Tai yen. 725.

- P'u. p. 40.
 Sa k'ien ts'i. 760.
 — li mi shi. 760.
 San Mao. 651a.
 Sang K'in. 756.
 Shan K'ien chi. 552. 1041.
 Shao (chen jen). 952a.
 — Po wen. 1038.
 — Yao fu. 686.
 — Yung. 206. 686.
 Shen nung p. 26, 75.
 — shi. 341.
 — wei. p. 47.
 Shi Cheng chi. 365.
 — Hu. 1079.
 — K'an. 49.
 — Kiao. 735.
 — K'uang. 332.
 — lin. 608.
 — liang. p. 46.
 — Yu. 275.
 Shu ho. p. 42.
 Shui. p. 48.
 Si lou. 1077.
 — Yen shan. 775.
 Siao Hien ming. 450.
 — Ping. p. 45.
 — T'ung. 1033.
 — Tsz' hien. 554.
 Sie Ao. 959.
 — Ch'eng. 801.
 — Feng siang. 530. 635.
 — Ki. 1007.
 — Kü cheng. 1052.
 — Ling yün. 1101.
 — Shi tai. 672.
 — Wei sin. 359.
 — Ying k'i. 1005.
 — Yung. 337.
 — Yung jo. 915.
 Sien Yü ch'u. 352.
 Sin (shi). 655.
 Su Chi. 652.
 — I kiek. 53. 526. 605.
 — 1089.
 — Kung. p. 44.
 — O. 975.
 — Shi. 64. 652. 799. 991.
 — Sün. 652.
 — Sung. p. 47.
 — Tung p'o. 797. 991.
 — 1055.
 Sü Chi ts'ai. p. 40.
 — Hian. 286.
 — Kia tai. 885a.
 — Kiai. 763.
 — Kien. 76.
 — K'o chao. 573.
 — Kuang k'i. 266.—p. 82.
 — Ling fu. 889.
 — Piao. 539. 540. 545.
 Sü Piao jan. 1058.
 — Po. 431.
 — (shi). 292.
 — Wen po. 808.
 — Yen shun. p. 49.
 — Yung ch'eng. p. 49.
 — Yung süan. 794.
 Sun Chao. 354.
 — chen jen. p. 44.
 — chi. p. 45.
 — Jou chi. 761.
 — Kuang hien. 583.
 — Kung. p. 77.
 — Mien. 870.
 — Sheng. 861.
 — Shu jan. p. 37.
 — Sz' mo. 31. 129. 708.
 — 934. 937.—p. 42, 43.
 — Yen. p. 37.
 — Yün hien. 220.
 — Yung ho. 79.
 Sün. p. 45.
 — K'uang. 818.
 — Po tsz'. 460.
 Sung. p. 47.
 — Kia. 340.
 — K'i. 245. 315. 604.
 — King lien. 943.
 — Kio. 429.
 — Lien. 943. 1123.
 — Ts'i k'iu. 187.
 — Tsz' an. 989.
 — Yang tsz'. 1030.
 — Ying sing. 885.
 — ma Kuang. 424. 520.
 — ma Ts'ien. 740.
 Ta Ming. p. 46.
 Tai K'ai chi. 66.
 — K'i tsung. 529.
 — Tsu. 30.
 — Yüan li. 37. 323.
 Tai ts'angkung. 849.—p. 41.
 Tan k'i. 216. 348. 369.
 — 788.—p. 49.
 T'an Ts'iao. 187.
 — Ts'ui. 183. 880a.
 T'ang chi. p. 40.
 — Heng. 1097.
 — Kin. 499. 511.
 — Meng. 638.
 — Shen wei. p. 47.
 — Shun chi. 334.
 T'ao Hua. 677.
 — Hung king. 26. 63.—
 — p. 42.
 — Kiu ch'eng. 58. 762.
 — Ku. 950.
 — Ts'ien. 796. 805. 1124.
 — Tsung i. 762.
 — yin kü. 851. 873. 898.—
 — p. 43.
 T'ao Yüan ming. 1124.
 Teng Hien ming. 549.
 — K'ing ts'ai. 432.
 — Te ming. 549.
 T'ien Ju ch'eng. 767.
 — Yü. 844.
 Ting Tu. 922.
 — Wei. 884.
 T'io t'io. 455. 819.
 Ts'ai Ju mou. 667.
 — Kü hou. 902.
 — K'uan fu. 902.
 — Siang. 5. 428.
 — T'iao. 878.
 — Tsung yen. 8.
 — Yung. 973.
 Tsan ning. 817. 1055.
 — Yin. 12. 707.
 Ts'ang Hie. 905.
 — k'i. p. 45.
 Ts'ao Chao. 349.
 — Chi. 913.
 — Fan. 430.
 — Hien. 383. 1034.
 — Hio. 746.
 — Shu ya. 237.
 — Ts'ao. 912.
 — Tsz' kien. 913.
 Ts'eng Ts'ao. 425.
 Ts'i Te chi. 1009.
 Tsiao Hi cheng. 932.
 — Kan. 243.
 Ts'iao Chou. 237.
 Tsie chai. p. 53.
 Tsien Chung yang. 782.
 — I. 311. 782.
 — K'i. 939.
 Ts'in Ch'eng tsu. 947.
 — Tsing. 949.
 — Yüe jen. 562.—p. 41.
 Ts'ing Hia tsz'. 859.
 Tso K'iu ming. 408.
 — Sz'. 656.
 — Tsz'. 607.
 Tsou Fu. 339.
 Tsu Ch'ung chi. 752.
 — Tai chi. 47.
 Ts'ui Chi ti. 420.
 — Hao. 710.
 — Hing kung. 961.
 — Pao. 355.
 — Shi. 831.
 — Yüan liang. 132.
 Ts'un chung. 510.
 — ts'i. p. 37.
 Tsung Lin. 336.
 — (shi). p. 48.
 Ts'ung cheng. 262.
 Tsz' Hia p. 34.
 — lung. p. 83.
 Tu Fu. 974.
 — Ki yang. 1135.

- Tu Ku t'ao 854.
 — Kuang ting. 492. 952.
 1058a.
 — Pao. 842.
 — Shan fang. p. 46.
 — Shu. 976.
 — Sün ho. 825.
 — Sz' king. 924.
 — T'ai king. 1110.
 — Tsz' mei 974.
 — Wan. 1135.
 — Yu. 1003.
 — Yü. 89.
 T'u Pen tsun. 433. 623.
 — Su. 906. 980.
 Tuan Ch'eng shi. p. 95.
 — Kung lu. 582.
 — Kuo. 662.
 Tung Chung shu. 86.
 — fang So. 464. 689. 724.
 — pi. p. 54.
 — Ping. 920.
 — po 991
 — Wu sin. 998.
 — yüan. 214. 222. 414
 612. 616. 737. 993.—
 p. 48.
 Tung kün. p. 40.
 — ming. p. 43.
 Wan Chen. 452. 539.
 — Piao. 925.
 Wang An shi. 461. 965.
 — Cheng. p. 81.
 — Chi chung. 967.
 — Chi fang. 715.
 — Ch'ung. 497.
 — Fang king. 466. 1129.
 — Fou. 688.
 — Hai ts'ang. 225. 228.
 969. 1093.—p. 48.
 — Hao ku. p. 48.
 — Hin chi. 549.
 — Hüan ho. 657.
 — Huang. 738.
 — Hung tsien. 1077.
 — I. 237.
 — Jen yü. 264.
 — Ju yen. p. 53.
 — Jui. 56.
 — Ki. p. 54.
 — K'i. 653.
 — Kia. 736.
 — King kung. 461.
 — K'iu. 631.
 — Kuan. 159. 1067.
 — K'uang. 1064.
 — Kui hio. 412.
 — Kui ling. 1015.
 — Kun. 636.
 — Kün. 349.
 — Li. 800.
 Wang Lun. p. 53.
 — Min 666 680.
 — Ming ts'ing. 209.
 — P'an. 1077.—p. 82.
 — Pi. 242.
 — Ping. 198. 204. 471.
 — P'u. 865.
 — Sheng chi. p. 54.
 — Shu. 241.
 — (shi). 103.
 — Shi chen. 207. 1090.
 1101a.—p. 55
 — Shi mou. 161. 185. 371.
 410. 514. 519.
 — Shi p'eng. 1015.
 — Shu ho. 528.—p. 42.
 — Si. 229.
 — Siang tsin. 533.—p. 70.
 — Sing chi. 209.
 — Su. 405.
 — Sün ch'uan. 1061.
 — Ta. 933.
 — T'ai. 372.
 — Tao. 1013.
 — T'ing siang. 1061.
 — Tsi. 256.
 — Tsie chai. 522.
 — Tsin chi. p. 48.
 — Tsing ming. 209.
 — Tso. 349.
 — Ts'un. 345.
 — Tsz' nien. 518. 736.
 — Wei. 1016. 1017.
 — Yin. 946.
 — yin kün. 1064.
 — Ying. p. 53.
 — Yüan chi. 115. 1018.
 — Yüan mei. 207.
 Wei Cheng. 814.
 — Chon. 970.
 — I lin. 872.
 — Kiao. 476.
 — Po yang. 904.
 — Shu. 447.
 — Sün. 825.
 — Tsz' ts'ai. 476.
 — Tsz' ts'ang. p. 42.
 — wang. p. 39.
 Wen Jen kui. 896.
 — K'o. 795.
 — Lin. 417.
 — Ta ming. 129. 131.
 — ti. 1022.
 — ting kung p. 82.
 — Yen po. 1068.
 — yin kü. 129.
 Wu Chen fang. 468.
 — Ch'eng. 909.
 — Jen kie. 445.
 — K'i. 467.
 — K'i sün. p. 73.
 — K'iu. 71. 215. 556.
 Wu Kün 769. 806.
 — Lai. 547. 1125.
 — Meng. 122.
 — P'eng. 110.
 — P'u. 189.—p. 40.
 — Shou 683.
 — Shu. 718.
 — Shui. p. 48.
 — ti. 1023. 1024.
 — Ts'ao li. 909
 — Yen k'uang 184.
 — Yen k'ui. 81.
 — Yüan ying 1125.
 Yang chi ki. 106.
 — Fu. 236. 306.
 — Hiung 106. 750.
 — Hüan chi. 483.
 — I 863.
 — Kui hou. 11.
 — Liang 818.
 — Shen. 238. 703. 860.
 — Shi ying. 257.
 — Sun chi. p. 45.
 — Sün. 788. 855.
 — Tan. 294.
 — Tien hui. 123.
 — Ts'ian. 1056.
 — T'ui siu. 313.
 — tsz'. 106.
 — Wan li. 41. 209.
 — Wei cheng. 879.
 — Yen. 548.
 Yao Fu. 272.
 — Ho chung. 1006. 1083.
 — Kuan. 768.
 — Seng t'an. 919.
 — Sz' lien. 450
 Ye Meng te. 733. 759. 608.
 — Sheng. 758.
 — Shi kie. 910.
 — Shi lin. 608.
 — tien shi. 31.
 — T'ing kui. 126. 153.
 — Tsz' k'i. 910.
 Yen Chi tui. 293.
 — Hiao chung. 914.
 — shan. 1090.
 — Shi ku. 270. 842.
 — Wou si. 6.
 — Ying. 1092.
 — Yung ho. 923.
 Yin Shi fu. 1141.
 Ying kung. p. 44.
 — Shao. 112.
 — Yang tsz'. 792.
 Yu chai. p. 73.
 — mo chai. 183.
 Yü Huan. 1019.
 — Kien wu. 1114.
 — lou nung. p. 73.
 — Pao. 614. 796.

Yü Shi nan. 586.

— si. p. 47.

— Tsung pen. 95.

— Tuan. 221.

— Wen. 761,

— Yen. 774.

Yüan Cheng. 17.

Yüan Chun. 1130.

— Chuang. 772.

— Hiao sü. 931.

— hu p. 82.

— hua p. 41.

— Hung tao. 622.

Yüan Ta te. 331.

— ti. 327.

— Tsz'. 1137.

Yüe ch'i. 258.

Yün lin. 1135.

Yung T'ao. 286.

A P P E N D I X.

CELEBRATED MOUNTAINS OF CHINA.



We frequently meet in Chinese botanical works with names of Chinese mountains, the situation of which is generally difficult to ascertain for European readers. I have therefore thought it serviceable to subjoin a list of about 70 of the more conspicuous hills and mountains of China proper, adding some particulars about their position, etc. My information has principally been derived from the *Kuang yü ki* and from the *Ta Ts'ing I t'ung chi* (see p. 69 and 87). I have also consulted the 道藏 *Tao ts'ang*, or Great Repository of Taoist literature, in which a list of the mountains venerated by Taoists and of the haunted grottoes situated on them is given. This compilation dates from the 3rd cent. B. C. The Taoists distinguish first the 十大洞天 *shì ta tung t'ien*, the 10 Great Haunted Grottoes, and besides these enumerate 36 other Haunted Grottoes, 三十六洞天 *san shi liu tung t'ien*, situated on various mountains of the Empire.

From early times the Chinese have revered the 五嶽 *wu yo*, or five sacred mountains: one in the middle, the others in the Northern, Southern, Eastern and Western parts of the ancient Empire. Annual sacrifices were made on them by the ancient Emperors, and on a rock of the Southern mountain the Emperor Yü is believed to have engraved an inscription (see Legge's *Shu king*).

Chinese literature abounds in descriptions of these various mountains. Many of these accounts are of very early date. Several works have been published collecting the greater part of the records relating to famous mountains, or giving extracts of them. See Alphabet. List of Works, Nos. 519 and 1101a.

1. 茶山 *Ch'a shan*. Yün nan. Tsu hiung fu, 7 li south of Nan an chou. Tea is produced on this hill.

2. 長白山 *Ch'ang po shan*. Shan tung. Tsi nan fu, 20 li south of Tsou p'ing hien.

3. 赤城山 *Ch'i ch'eng shan*, with the 6th of the ten great haunted grottoes. It forms part of the *T'ien t'ai shan* (see 56) in Che kiang.

4. 鐘山 *Chung shan*. Kiang su, north-east of Kiang ning fu. The 32nd haunted grotto.

5. 浮槎山 *Fou ch'a shan*. An hui. 80 li east of Lü chou fu.

6. 衡山 *Heng shan*. Hu nan. Heng chou fu, west of Heng shan hien. The Southern of the five sacred mountains, with the 3rd of the haunted grottoes.

7. 恒山 *Heng shan*. Shan si. Ta t'ung fu, 20 li south-east of Hun yün chou. The Northern of the five sacred mountains, with the 5th haunted grotto.

8. 霍山 *Ho shan*. Kuang tung. Hui chou fu, 100 li north-east of Lung ch'uan hien.

9. 霍童山 *Ho t'ung shan*. Fu kien. Fu ning fu, 70 li north of Ning te hien. With the first of the 36 haunted grottoes.

10. 華山 *Hua shan*. Shen si. T'ung chou fu, south of Hua yin hien. The Western of the five sacred mountains, with the 4th haunted grotto.

11. 華蓋山 *Hua kai shan*. Che kiang. 1 li east of Wen chou fu. The 17th haunted grotto.

12. 黃山 *Huang shan*. An hui. North-west of Hui chou fu. See also 44.

13. 會稽山 *Hui ki shan*. Che kiang. 30 li south-east of Shao hing fu. The 10th haunted grotto.

14. 蓋竹山 *Kai chu shan*. Che kiang. 30 li south of T'ai chou fu. The 19th haunted grotto.

15. 金華山 *Kin hua shan*. Che kiang. North of Kin hua fu. The 35th haunted grotto.

16. *Kin t'ing shan*. See 52.

17. 九華山 *Kiu hua shan*. An hui. Ch'i chou fu, south-west of Ts'ing yang hien.

18. 九疑山 *Kiu i shan*. Hu nan. Yung chou fu, Ning yüan hien. The 23rd haunted grotto. The Emperor Shun was buried on this hill, 2206 B. C.
19. 勾曲山 *Kou k'ü shan*, called also 茅山 *Mao shan*. Kiang su (see note 12a and Alph. List of Works No. 651a). The 8th great haunted grotto (see p. 43).
20. 勾漏山 *Kou lou shan*. Kuang si, Wu chou fu. 22nd haunted grotto.
21. 顧渚山 *Ku chu shan*. Che kiang, Hu chou fu. North-west of Ch'ang hing hien. Tea is produced on this hill.
22. 括蒼山 *Kua ts'ang shan*. Che kiang. Ch'u chou fu, 70 li east of Tsin yün hien. The 10th great haunted grotto.
23. 光福山 *Kuang fu shan*. Kiang su. South-west of Su chou fu.
24. 鬼谷山 *Kui ku shan*. Kiang si. Kuang sin fu, Kui k'ü hien. The 16th haunted grotto.
25. 琅邪山 *Lang ye shan*. Shan tung. Ts'ing chou fu, 150 li south-east of Chu ch'eng hien. The Emperor Shi Huang ti spent three months on this mountain in 219 B. C.
26. 歷山 *Li shan*. Shan si. 60 li south-east of P'u chou fu. Here the Emperor Shun, 2250 B. C., is said to have devoted himself to agriculture.
27. 良常山 *Liang ch'ang shan*. It forms part of the Mao shan (see 19). The 33rd haunted grotto.
28. 六茶山 *Liu ch'a shan*. Yün nan. Southern border of the department of P'u rh fu. Tea is produced on this hill.
29. 羅浮山 *Lo fou shan*. Kuang tung. Hui chou fu, 28 li north-west of Po lo hien. The 7th of the ten great haunted grottoes.
30. 廬山 *Lü shan*. Kiang si. 25 li south of Kiu kiang fu. The 8th haunted grotto.
31. 麻姑山 *Ma ku shan*. Kiang si. West of Kien ch'ang fu. The 28th haunted grotto.
32. *Mao shan*. See 19.
33. 蒙山 *Meng shan*. Sz' ch'uan. East of Ya chou fu. This hill is famed for its Tea.

34. 孟通山 *Meng t'ung shan*. Yün nan. South of Yung ch'ang fu. Tea is produced on this hill.

35. 幕阜山 *Mu fou shan*. Hu pei. Wu ch'ang fu, 20 li south-east of T'ung ch'eng hien. The 25th haunted grotto.

36. 峨嵋山 *O mei shan*. Sz' ch'uan. Kia ting fu, south-west of O mei hien. The 7th haunted grotto.

37. 盤山 *P'an shan*. Chih li. Shun t'ien fu, north-west of K'i chou.

38. 白石山 *Po shi shan*. Kuang si. 60 li south of Sün chou fu. The 21st haunted grotto.

39. 普洱山 *P'u rh shan*. Yün nan. South of P'u rh fu. Tea produced.

40. 首禪山 *Shou pei shan*, called also 大圍山 *Ta wei shan*. Hu nan. Ch'ang sha fu, 150 li north-east of Liu yang hien. The 13th haunted grotto.

41. 西山 *Si shan*. Kiang si. 30 li west of Nan ch'ang fu. The 12th haunted grotto.

42. 仙都山 *Sien tu shan*. Che kiang. Ch'u chou fu, 23 li east of Tsin yün hien. The 29th haunted grotto.

43. 嵩山 *Sung shan*, also called 嵩高山 *Sung kao shan*. Ho nan. Ho nan fu, north of Teng feng hien. The central of the five sacred mountains, with the 6th of the 36 haunted grottoes.

44. 松羅山 *Sung lo shan*. An hui. Hui chou fu, 13 li north of Hui ning hien. Famed for its Tea. This hill seems to form part of the Huang shan. See 12.

45. 四明山 *Sz' ming shan*. Che kiang. Shao hing fu, 110 li south of Yü yao hien. The 9th haunted grotto.

46. *Ta wei shan*. See 40.

47. 大酉山 *Ta yu shan*. Hu nan. 40 li north-west of Chen chou fu. The 26th haunted grotto.

48. 太和山 *T'ai ho shan*, also 武當山 *Wu tang shan*. Hu pei. Siang yang fu, 100 li south of Kün chou.

49. 太華山 *T'ai hua shan*. Yün nan. Yün nan fu, An ning chou.

50. 太白山 *T'ai po shan*. Shen si. South-western corner of the prefecture of Sian fu. The 11th haunted grotto.

51. 泰山 *T'ai shan*, written also 太山 *T'ai shan*. Shan tung. 5 li north of T'ai an fu. This is the Eastern of the five sacred mountains, with the 2nd of the 36 haunted grottoes.
52. 丹池山 *Tan ch'i shan*, also 金庭山 *Kin t'ing shan* and 桐栢山 *T'ung po shan*. Che kiang. Shao hing fu, 70 li east of Sheng hien. The 27th haunted grotto.
53. 桃源山 *T'ao yüan shan*. Hu nan. Ch'ang te fu, 30 li south-west of T'ao yüan hien. The 34th haunted grotto.
54. 天柱山 *T'ien chu shan*. Che kiang. Hang chou fu, south-west of Yu hang hien. The 31st haunted grotto. See also 57.
55. 天目山 *T'ien mu shan*. Che kiang. Hang chou fu, north-west of Lin an hien. The 34th haunted grotto.
56. 天台山 *T'ien t'ai shan*. Che kiang. T'ai chou fu, north of T'ien t'ai hien. See also 3. The T'ien t'ai mountain was the earliest seat of Buddhism in China. See Dr. Edkins' *Chin. Buddhism*, p. 137.
57. 潛山 *Ts'ien shan*, also 天柱山 *T'ien chu shan* (see 54). An hui. An k'ing fu, Ts'ien shan hien. The 14th haunted grotto.
58. 青城山 *Ts'ing ch'eng shan*. Sz' ch'uan. Ch'eng tu fu, south-west of Kuan hien. The 5th of the ten great haunted grottoes.
59. 青田山 *Ts'ing t'ien shan*. Che kiang. Ch'u chou fu, 1 li north-west of Ts'ing t'ien hien. The 30th haunted grotto.
60. 紫蓋山 *Tsz' kai shan*. Hu pei. King men chou, 50 li south of Tang yang hien. The last of the 36 haunted grottoes.
61. 都嶠山 *Tu kiao shan*. Kuang si. Wu chou fu, 20 li south of Yung hien. The 20th haunted grotto.
62. 洞庭山 *Tung t'ing shan*. Kiang su. Su chou fu. On an island of the T'ai hu lake. The 9th of the 10 great haunted grottoes.
63. 洞陽山 *Tung yang shan*. Hu nan. Ch'ang sha fu, 60 li north-west of Liu yang hien. The 24th haunted grotto.
64. 桐栢山 *T'ung po shan*. Che kiang. T'ai chou fu, 25 li north-west of T'ien t'ai hien. See also 52.

65. 王屋山 *Wang wu shan*. Ho nan. Huai k'ing fu, 80 li west of Tsi yüan hien. The first of the 10 great haunted grottoes.

66. 委羽山 *Wei yü shan*. Che kiang. T'ai chou fu, 5 li south of Huang yen hien. The 2nd of the 10 great haunted grottoes.

67. 武夷山 *Wu i shan*. Fu kien. Kien ning fu, 30 li south of Ch'ung an hien. The 15th haunted grotto. This mountain is famed for its Tea.

68. *Wu tang shan*. See 48.

69. 五臺山 *Wu t'ai shan*. Shan si. T'ai yüan fu, Wu t'ai hien.

70. 玉笥山 *Yü sz' shan*. Kiang si. Lin kiang fu, 40 li south-east of Hia kiang hien. The 18th haunted grotto.

ERRATA AND ADDENDA.

- Page 28 Line 8 for *Tsi* read *Ts'i*.
" 30 " 13 from below add a comma after *Veratrum*.
" 33 last Line for Cheng hūan read *Cheng Hūan*.
" 35 Line 16 from below for *ch'un* read *shun*.
" 37 " 12 for *yen* read *jan*.
" 53 " 6 from below for *jen* read *yen*.
" 60 " 8 " " " 間 " 問.
" 62 " 8 " " " tsao " sao.
" 63 " 14 for 艸 (second time) read 十.
" 65 " 12 for 粟 read 粟.
" 95 " 15 add a comma after *Persian*.
" 169 No. 452 for 物 read 物.
" 183 " 660 " tien " t'ieh.
" 197 " 865 " 溥 " 溥.

Page 123.—Since my paper was written Dr. Tatarinov died in October 1881. The Journal de St. Pétersbourg of October 23 devotes a long article to his memory.

